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EDITED BY

LUNSFORD P. YANDELL, M. D.,

PROFESSOR OF CHEMISTRY IN THE LOUISVILLE MEDICAL INSTITUTE;

HENRY MILLER, M. D.,

PROFESSOR OF OBSTETRICS IN THE SAME;

AND

THEODORE S. BELL, M. D.

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APRIL, 1838.

ART. I.—*On the manner in which the fluids enter the Absorbent Vessels.* By JOHN E. COOKE, M. D., *Professor of the Theory and Practice of Medicine in the Louisville Medical Institute.*

The subject of absorption is one of the most interesting in Physiology. In every part of the body there is a great amount of lymph secreted, for the purpose of lubricating and keeping moist the various surfaces which lie in contact with one another; and wherever this is poured out upon a surface in the interior of the body which has no outlet, the result would be an accumulation, which must soon be destructive, if the fluid were not by some means removed as fast as it is poured out. This is done by vessels called absorbents, from their absorbing, or as it were sucking up, the fluids in question; and lymphatics from their containing and carrying into the circulation the fluid spoken of, which is called lymph.

The lacteals are another branch of the absorbent system,

which take up the chyle from the alimentary canal, and carry it into the blood vessels.

These operations being carried on in the interior of the body, and the absorbent vessels being very minute, and carrying, for the most part, a transparent fluid, it was long before anatomists discovered their existence. A little more than two hundred years ago the absorbent system was unknown to them. Great attention has since been paid to the subject, and a great number of facts have been ascertained in relation to these vessels, from a careful consideration of which it is believed that their structure and mode of action may be determined.

It is certain that a fluid passes through the absorbents into the bloodvessels. If they be tied, as when they are inclosed in a ligature put round an artery in consequence of lying near it, they swell below the ligature, that is on the side farthest from the heart, as the veins do; and when the ligature is removed the swelling subsides.

The passing along of the fluid contained in them, is necessarily the result of force exerted on it. That this force may be effectual, they must have valves, as the veins have, to prevent the fluid from being driven backwards as well as forwards in them. This inference is shown to be correct by the observation of anatomists, according to which the valves of the absorbents are very numerous.

From this structure it is obvious enough how the fluid is made to move forwards in these vessels, after it is once lodged in them. The contractile power pressing on it, puts it in motion, and the valves preventing its passing backwards, its course is directed towards the thoracic duct through which it passes into the subclavian vein. But the question may well be asked, how does the fluid find entrance into the absorbents? This question I shall endeavor to answer.

It is manifest that there must be a force exerted on the fluid to cause it to enter the mouths of the absorbents. These vessels cannot exercise any control over it until it gets into their cavity. One of the forces exerted is the general pressure of the atmosphere, which causes every cavity in the soft parts of the body to be filled with something or other, as may be seen in croup when the child expands its chest: as the air does not pass freely into the lungs, the soft parts all round the bony covering of the chest, are driven in, presenting the appearance of hollow places above the clavicles.

The contraction of the alimentary canal upon its contents, also exerts a very considerable force on the fluids contained in it; and the pressure of every muscular contraction does the same on the fluids in the substance of the muscles, or in the texture between them and the surfaces against which they press when in action.

The tendency of these forces is to cause the fluid pressed upon, to pass into any open cavities adjoining; as into the mouths of vessels opening into the cavity in which the fluid pressed upon is contained. But this force would be exerted in vain upon the extremities of flaccid vessels opening into a cavity, which by pressure would be made to lie flat and thus be closed. The extremities of the absorbents must therefore present open mouths to the cavities from which they absorb fluids, so as to be in a condition to receive the fluid pressed into them; and be capable of returning to the open state after contracting on the fluid received into them, and propelling it.

The fluid once lodged within the cavity of the absorbent vessel, nothing more is necessary to propel it in the proper direction, but the same powers and structure observed in every other part of these vessels. The contraction of this first portion of the vessel, aided by a valve at its extremity, or entrance, (as the ventricles of the heart are aided by the

valves at the entrance from the auricles into them,) must necessarily drive the fluid forward; and its onward course is secured by the same powers and structure throughout.

The same mode of action with the same aid of valves, manifestly prevails in the lacteals, whose office is to take up and carry the chyle into the bloodvessels.

This mode of action would manifestly be effectual in absorbing and carrying forward any fluid that could enter into the open extremities of the absorbents. The action is very similar to that which is known to be exerted by the heart in drawing blood from the veins, and propelling it into the arteries. The heart has the power of dilating itself when contracted, and of thus presenting an open cavity to the blood contained in the great reservoir formed by the union of the ascending and descending vena cava. Into this cavity the blood is forced to enter by the general pressure of the atmosphere, already spoken of; by the pressure of the current from every part of the body into this reservoir, and of the latter itself upon the blood contained in it. The moment the blood is lodged within the cavity of the heart, the contraction of the ventricle aided by the valves at the mouth of the orifice by which it entered, necessarily drives it forward; and its return when the heart again dilates, is prevented by valves at that orifice through which it passed into the arteries. Here the heart corresponds with the first portion of an absorbent vessel, which dilates to receive the fluid it is intended to carry forward, and contracts to propel it in its course; while its repulsion into the reservoir from which it was received, is prevented by valves at the mouth by which it entered, and its return during the dilatation is forbidden by valves at the orifice through which it was driven.

This explanation of the manner in which a fluid is absorbed, may not be received as the actual and undoubted way

in which it is done; but it is difficult to conceive of any other in which it can be accomplished, and it cannot be rejected as insufficient to effect the purpose. For, whatever fluid can be pressed into the open mouth of an absorbent with a valve at the entrance, if contraction take place, must be driven forward and be passed into the blood. Any fluid therefore capable of entering such minute vessels, and of exciting them to contract, may be absorbed.

It has been said that the extremities of the absorbents must project into the cavities from which they take up fluids, with open mouths so as to be in a condition to receive the fluids pressed or forced to enter them; and be capable of returning to the open state after contracting on the fluid received into them, and propelling it. This may be the result of a permanent structure; the part being made capable of preserving the open state and yet flexible enough to act upon the fluid after it has entered; or the open state may be produced when necessary by an erection of the extremities of the absorbents caused by the appropriate stimulus of the fluid they are made to take up. If the latter be the way, as the same fluid causes the erection and the contraction of the vessel which propels the fluid, no other can produce it and no other can be absorbed. But the fluid observed in dropsies, which is often different from the healthy secretion, bloody serum, blood, pus, and injected fluids of different kinds are absorbed, and therefore can excite the erection, if that be the mode, and the contraction. There is therefore no peculiar sensibility to the fluid alone which is ordinarily to be absorbed: and if the erection be produced by any fluid, it must continually exist, because there are fluids always present; that is the erection must be permanent. In other words the structure by which the absorbents present open mouths to the fluids in the cavities, is a permanent one; which is con-

firmed by the consideration that as secretion is incessant, absorption must be, and therefore a permanent structure is to be expected.

That the lymphatics absorb various fluids as pus, extravasated blood, serum, and even fluids injected into the cavities of animals for the sake of experiment, is admitted. Every case of an abscess cured without opening it, affords evidence of this, as the absorbents are the only vessels which take up extravasated fluids. The fine red streak passing up along the arm, sometimes observed after bleeding, can only be explained by attributing the color to the passage of the blood along an absorbent which has taken it up. The cure of semi-purulent effusions into the cavity of the thorax, occurring sometimes after a pleurisy, can only be effected by the absorption of the fluid.

It has been maintained, however, that the lacteals take up nothing but chyle; that there is a mutual attraction between them; and that the lacteals have the power of selecting the chyle and of rejecting every other fluid.

But the general structure of these vessels is the same with that of the lymphatics, and this is entirely sufficient for the end in view, the absorption of the chyle. This being the case, the fair presumption is that these vessels can take up other fluids if they should be presented to them.

As to an attraction between the lacteals and the chyle, attraction is a property of matter in mass, or of the chemical elements of matter. Chemical attraction cannot be intended here; and the attraction which belongs to matter in mass is not peculiar to any one kind of matter, and such an attraction of the lacteals for chyle alone, cannot exist, and cannot be intended. And what does the word attraction do more than convey the idea of the fact that in certain circumstances masses of matter approach one another, and the chemical

elements of matter unite together. If therefore the word attraction be used here at all it can properly be only to express the fact, if it be a fact, that these vessels take up the particular fluid called chyle, and no other. The use of the word therefore does nothing but confuse or mislead the mind by introducing a term from other sciences, which has no clear idea connected with it in the case in question.

As to the lacteals selecting the chyle and rejecting other fluids, these terms imply more than can be intended. For surely no one can hold that they have any power of choice: no one can believe that they can do any more than act as they are impelled; so that if they do not act upon other fluids, it is because they are not susceptible of any impulse to action from them. The decision of the matter therefore is thrown upon the facts to be determined by observation. For their sensibility or insensibility to the action of any fluid, is to be determined by observing whether or not they absorb that fluid. That they do absorb other fluids is shown by a variety of facts.

In the American edition of the Encyclopedia we are told that "opportunities of observing the lacteals in the human subject do not often occur; but they may easily be demonstrated in a dog or any other quadruped that is killed two or three hours after feeding on milk; for then they appear filled with white chyle."* From this it is to be inferred either that the lacteals take up milk, or that the chyle is not always the same, (viz: that it is not white unless the animal be fed on milk,) and consequently in either case that the lacteals have not a sensibility to that fluid only.

Again, it is mentioned in the Edinburgh System of Anatomy, that "in a dog, if opened long after a meal,

* Dobson's edition, vol. 1, p. 735.

they are found distended with a liquor that is transparent and colorless like the lymph."*

In the same work it is said, "that the chyle is absorbed into the lacteal vessels, by the adhering villous coat, has been a long time known, by experiments of injecting tinctured liquors, which readily describe the same course."†

Again, it is said, "nor is it any thing uncommon for a pellucid lymphatic liquor to fill the lacteals, in a dying animal, instead of chyle; or, for some of them to appear milky in one part of the mesentery, and limpid or pellucid in another."‡

These statements show that the lacteals sometimes take up transparent fluids, and even artificially colored fluids.

There are many other facts, some of them very well known, which entirely accord with these, and sustain the doctrine that the lacteals take up other fluids than chyle.

If a man remain without eating until it is certain that there can be no chyle in his alimentary canal, and then take a large quantity of ripe water-melon, he will in a short time be under the necessity of passing a large quantity of fluid from the urinary bladder. This is unquestionably secreted from the general mass of blood by the kidneys, and must have passed into the blood through the lacteals. These vessels, therefore, can take up a fluid which is not true chyle.

If a man fasting drink often and freely of gin and water, he will in like manner pass off a great quantity of fluid, which must have been secreted by the kidneys from the blood, and therefore must have been carried into the blood-vessels through the lacteals.

There is a species of cactus very common in the islands of Bermuda, which is made to cover the rough stone walls of the gardens, in order to protect them from plunderers by the

* Vol. 3, p. 208. † Ibid, p. 238. ‡ Ibid, p. 242.

innumerable prickles which grow on this plant. The fruit is somewhat like a pear in shape, of a red color when ripe, and contains a red sweet juice which children are fond of sucking. They frequently do this until there is a free discharge from the bladder, such as we experience from eating freely of water-melon; but the fluid discharged is entirely red. This I have myself seen frequently occur. In this case, beyond question, the red fluid passes through the lacteals into the blood, and by the kidneys to the bladder.

Saffron tinges the discharge from the urinary bladder of a yellow color. Rhubarb does the same. It is a very common thing for those who are in the habit of taking it in small quantity, as in the common pill of rhubarb, aloes, and calomel, to observe a few hours after they have swallowed it, and hours before it acts on the bowels, that the fluid discharged from the bladder, is colored by the rhubarb.

In like manner the root of madder taken internally tinges the urine red, and turmeric gives it a deep yellow color. The tincture or infusion of logwood sometimes gives it a red color; so that Lewis advises that the patient who is taking it, be informed, in order that he may not be alarmed by supposing the discharge to be blood. The prussiate of iron has also been frequently discovered in the urine. Garlic taken internally is perceived by its strong scent in the urine. The balsam copaiba gives it a bitter taste. Savin, Boerhaave says, impregnates the urine with its smell.

Cantharides continued too long on the skin after it has lost the protection of the cuticle, produces severe pain on passing the water from the bladder; in other words irritates the urethra as painfully as it does the skin. The internal use does the same; showing that the irritating matter of the insect is taken up by the lacteals as well as by the lymphatics.

It is objected to these strong and numerous facts, that the substances mentioned are not to be discovered in the lacteals and the circulating blood.

The answer is, that they cannot have gotten into the kidneys but through those vessels, and it is certain they are found there; and moreover that the prussian blue has been detected in the general circulation in numerous experiments made by Dr. Lawrence and Dr. Coates, some years ago, in Philadelphia.*

This answer, however, is not satisfactory to some who maintain the doctrine that the lacteals cannot take up any thing but chyle; and not being able to question the fact that the substances mentioned have been found in the urine, rather than admit that they are taken up by the lacteals, they prefer the monstrous supposition that they had been digested and re-produced. "Can it be credited," says a distinguished Physician, "that any substance, after a subjection to the digestive and assimilative powers, retains in the slightest degree its original properties?" "To me it is clear, that the process of assimilation, as performed either by the chylopoietic viscera, or by any part of the absorbent apparatus, completely decomposes all substances, and however discrepant in their properties, reduces them to a homogeneous fluid fitted for the purpose of nutrition. But when thrown into the secretions or excretions, being removed beyond the sphere of the vital energies, the chemical affinities are sometimes again brought into play, by which these substances are in part, or wholly regenerated."

As to the first part of this quotation, it is very well known that castor oil, after subjection to the digestive powers, often makes its appearance in the discharge from the bowels, unal-

* See American Journal of Med. and Phys. Sciences, vol. 5, p. 327.

tered. If so gross an oil retains its original properties after such subjection, how undeniable that the extremely volatile oils, as that of garlic, may be unaltered by the digestive powers. And if unaltered, how impossible that so volatile an oil, so diffusible, and penetrating the whole mass with which it is mixed in digestion, should avoid being diffused through the chyle and passing along with that fluid when entering the lacteals? It is quite as incredible that castor oil should retain its original properties in the circumstances stated, as that the other substances which have been mentioned, should do so; and yet we see it does retain them. And it would be just as reasonable an explanation of its appearance in the excretions from the bowels, that being removed beyond the sphere of the vital energies, the chemical affinities are again brought into play by which it is in part or wholly regenerated, as it is that the other substances, rhubarb, &c., are thus reproduced in the secretion of the kidneys.

The absurdity of this supposition is shown, moreover, by the consideration that if the matters subjected to the digestive powers, are converted into the homogeneous fluid spoken of, and this only can enter the lacteals, this fluid is the same whether rhubarb, saffron, madder, turmeric, or prussian blue be used, or not; and therefore the chemical affinities should sometimes produce these effects or appearances when they are not used. This, however, no one has ever remarked.

These effects should likewise appear without regard to the nature of the substance used in the experiment. Thus when one is used the smell or the color of another should sometimes be produced. When rhubarb is used, the violet smell should sometimes be perceived in the secretion from the kidneys; or the bloody color of that fluid following the use of the tincture of logwood, or of the juice of the cactus or prickly pear in Bermuda. In like manner the yellow color

or the violet smell should appear in the same secretion, when the tincture of logwood or the juice of the cactus has been used. But these things never occur. The yellow color follows the use of rhubarb or saffron; and the red, the use of the logwood or madder, so uniformly that the color manifestly depends upon the material used.

The fact therefore, being established, that these matters being taken into the stomach appear afterwards in the secretion from the kidneys, it is perfectly correct to conclude that they enter into the fluid from which they are separated, by the only way we are acquainted with; viz. by the lacteals. And it cannot be admitted, that this conclusion drawn from plain facts shall be questioned or held doubtful upon the ground of a bare supposition, that the matters in question are regenerated in the fluid secreted, by chemical affinities; and that supposition itself encumbered by the remarkable fact that such affinities never produce the colors spoken of, except when the substance is used in which they reside.

There is one fact, moreover, which is directly in the face of that supposition.

The supposition, it will be recollected, is, that the process of assimilation as performed either by the chylopoietic viscera, or by any part of the absorbent apparatus, completely decomposes all substances, reducing them to a homogeneous mass, in which they do not retain in the slightest degree their original properties.

The fact which is directly opposed to this supposition is the following. When rhubarb is taken at meal-time, either before or after eating, or during the meal, the proper action on the bowels follows in due time, several hours after the digestion of the meal is completed; as well as the peculiar color it gives the urinary secretion, some time before its action on the bowels.

In one person of good health and good appetite and perfect digestion, who has often had occasion to take the common pill of rhubarb, aloes and calomel, digestion is very thoroughly performed in four hours: the pill mentioned usually operates in twelve hours, when taken at meal time, or at any other: and the urinary secretion has frequently been observed to be of the peculiar yellow color communicated by rhubarb, several hours before the action on the bowels. It cannot, therefore, be questioned that rhubarb preserves its identity notwithstanding its exposure to the action of the digestive powers; and consequently the supposition that the coloring matter of rhubarb is digested and reproduced by the operation of chemical affinities in the urine after its secretion in the kidneys, is groundless. This substance when perceived in the urine must, therefore, have been taken up by the lacteals, and conveyed into the blood from which it is separated by those glands, and consequently these vessels have no peculiar power of choosing, or distinguishing chyle from other matters.

This being the case, and the lacteals having been observed in many cases to absorb various fluids, and even artificially colored fluids, as already stated in passages quoted above, and the lymphatics doing the same; as there are always fluids in the alimentary canal, the lacteals must always be absorbing; this process going on, according to one of the quotations, even in a dying animal. Absorption, therefore, being continual in both lymphatics and lacteals, the necessary structure for presenting open mouths in their extremities to the fluids to be absorbed, must be permanent.

To recapitulate, it is evident that the extremities of the absorbent vessels, lymphatics and lacteals, cannot act on the fluids to be absorbed before they get within their grasp.

2. That the fluids must be driven to enter by some exter-

nal force, (external, as to the absorbents) as the general pressure of the atmosphere, and the action of the cavities in which the fluids are contained.

3. That in order to receive them, the extremities of the absorbents must be open to admit them when forced in.

4. That when the fluids have entered the absorbents, they can only be propelled by the contraction of the extremities of those vessels on the fluids contained in them.

5. That this contraction would expel the fluid again if the external orifice were not provided with a valve to prevent it.

6. That by the aid of this valve the contraction must propel the fluid onwards in the absorbent vessels.

7. That in this state of contraction the extremities of the absorbents must have the faculty of dilating before they can receive another portion of the fluid to be absorbed.

8. That, therefore, the faculty of alternately contracting and dilating (in a manner similar to that which takes place in the ventricles of the heart) is necessary to enable the extremity of an absorbent vessel to take up the fluid to be absorbed.

ART. II.—*Vulgar Errors in Medicine, No.* 1. By H. MILLER, M. D.

It appears to us, after an attentive observation of many years, that a "vulgar error" of serious magnitude very generally obtains in Western practice, which, we have thought, it may be profitable to point out and expose; we mean the practice of administering mercurial cathartics, by far too in-

discriminately, and when other and more innocuous drugs will fulfil the indications as well, if not better. If it can be made appear that mercurials are *needlessly* administered, it may be concluded that their use, in all such instances, is injudicious, nay, reprehensible. Why? Because, no matter what precautions may be taken, we can have no assurance that their specific constitutional effects may not be developed, even when a very small amount of the remedy has been taken. There is, perhaps, no practitioner of much experience, who has not known ptyalism to be produced by a single dose of 20 grs. calomel, or even 5 grs. administered in combination with jalap, aloes, scammony, rhubarb, in some of the various forms of purgatives, denominated "antibilious pills." And a mercurial impregnation of the system is no trivial matter; it sometimes very seriously impairs the constitution, and leaves behind "aches and pains," that cling to the patient as long as he lives. It is, therefore, neither the part of science nor humanity, to risk such injury;—to jeopardize the health and happiness of our patients, unless there is manifest necessity; unless we are fully convinced that no other cathartics will do as well, in the particular case for which we are prescribing. This proposition is so plain that it needs no argument to sustain it; let us, then, inquire whether there be not an extensive class of cases, in which other cathartics will answer *better* than *mercurials.* 1st—In all diseases produced by a plethoric state of the system, when the object of purging is to deplete, to diminish the quantity of the circulating fluids, saline cathartics, as Epsom salts, either alone or in conjunction with calcined magnesia, will fulfil the indication with greater certainty than calomel, or mercury in any other form. Nor is the utility of this compound limited to such a condition of the general system; it is capable of relieving morbid states of

particular organs, under a variety of circumstances. In certain disordered conditions of the digestive function, attended with acidity and intestinal torpor, this saline purgative, with the addition of carbonate of potass, or the muriate of soda alone, will afford very great relief, and that too after calomel or blue pill had been tried in vain. Then again, to those slight inflammatory affections of the mucous membrane, called catarrhs, by the copious serous secretions which they excite from the intestinal mucous membrane, saline cathartics are particularly adapted. We do not know a better prescription for common colds, inflammation of the bronchial mucous membrane, than a good dose of salts, with or without magnesia, repeated, if necessary, for several mornings consecutively.

2d. In all cases where purgatives are administered for the purpose of operating a revulsion from a vital organ that is the seat of engorgement or inflammation, some other medicines are more efficient than mercurials. For example, in such affections of the brain or spinal cord, senna will act with more certainty, and afford greater relief than calomel. If the affection be so grave as to seriously impair innervation, and make it difficult for any cathartic medicine to operate, croton oil is the proper prescription, which may not only be expected to act with greater certainty, but seems to possess a peculiar adaptedness to such morbid states.

3d. For sudden affections arising from repletion, or errors in diet, any *brisk* cathartic compound is preferable to calomel, which is commonly *slow* in its operation. And in such cases, very often an emetic of Ipecacuanha or table salt is the proper remedy.

4th. In constipation, whether temporary or habitual, and the symptoms produced by it, a simple aperient pill

of aloes, rhubarb and scammony, or the compound extract of colocynth, with a minute portion of tartar emetic, is all that is frequently required. In such cases, nothing can be more unwise or improper than to combine mercury with the other purgatives, because it is not needed, and may do harm.

5th. In some of the pyrexia, indeed in most febrile diseases, not produced by miasmata, when there is no marked derangement of the hepatic function, mercurials are not particularly indicated, and may often be advantageously substituted by other and milder and safer cathartic medicines. It is not to be inferred from the exception made in favor of biliary derangement, that it is conceded that even in such cases, mercury is *the remedy*, and that it may not be dispensed with. To authorise such a conclusion it must be made appear that no other remedial agent can act on the liver, or restore its healthy function. While it may be admitted that no other article in the materia medica displays such an unequivocal, direct, or specific action on the liver, it is far from being proved that this organ, being once deranged in its function, cannot return to its healthy state, except under the conduct of calomel. Unless it furnish an exception to all the other organs, and refuse obedience to the vital laws governing them, its healthy functions will return after a time, without medicine at all, if the disease transcend not the curative powers of nature. It is not doubted that mercury acts remedially in hepatic derangements, and that its action is often friendly and salutary; but it is worthy of consideration whether it is *always* necessary and might not frequently be dispensed with. It may, without offence, be characterised as "a vulgar error" to suppose that the liver is so defenceless, so destitute of recuperative pow-

ers, as to require the aid of Hercules to extricate it from every, the slightest embarrassment that befalls it. Again; when the liver is borne down by a weight of disease that it cannot shake off, is there no mode of conveying relief to it, except by the direct specific action of mercury? Unless it stand among the system of organs, "solitary and alone," and has renounced all allegiance to the sympathy, which connects and unitizes the whole, there are other avenues of approach, through which remedial as well as noxious impressions may be made on it. Thus, when there is deficient biliary secretion from increased excitement or irritation, nauseants by their relaxing, and counter irritants by their revulsive action, will often restore healthy secretion. When the bile is secreted in redundancy, treatment based upon general or physiological principles is more rational than the mercurial; for it cannot be, although this has been maintained by some, that calomel possesses the property of diminishing augmented, as well as increasing deficient biliary secretion, and it is not, therefore, applicable to all hepatic derangements indiscriminately.

Admitting, however, that mercurials are the *only* means of reaching the liver, and modifying remedially its functions,—in the greater number of cases in which they are conceived to be of paramount value, is it well established that the derangement of the hepatic function is radical, and its restoration *alone* an indication of vital importance? In by far the greater number of febrile diseases, it may be that the hepatic secretion participates merely in the general affection of the secernent system, which is so distinguishing a feature of such diseases. A simultaneous morbid affection of the nervous, circulatory and secernent functions is the most constant and characteristic feature of fever, and the liver only suffers in

common with other glandular structures. Of what avail, then, will it be to restore its secretory action, were it always in our power, while the lesion of innervation and secretion remains in the other organs and tissues? Can the oak be cut down by the axe, aimed at a single branch, while the trunk and the roots are untouched?

But not only are affections of the liver, occurring in common with those of other organs, suspected to be fundamental, the head and front of disease, when in reality they are not, but, it is believed, that this organ is often wrongfully accused, and most confidently declared to be diseased, when it is perfectly healthy. The liver is, in truth, a sluggish, unimpulsive viscus, possessed of a low type of sensibility, and does not merit the pathological distinction, which has been conferred on it. The closest post mortem scrutiny has not often detected in it prominent marks of disease, in febrile and other acute disorders, and the most material evidence is, therefore, wanting to establish its claims to the notoriety it has acquired. But not only is the liver often erroneously suspected to be the seat of disease, against which mercurial remedies are assiduously directed; it is believed, without evidence, to be the prolific root from which a great many diseases grow. How extensively, for example, is the Johnsonian theory of dysentery, cholera morbus, &c., accredited and made the basis of medical treatment! And after all it is mere theory, rendered plausible, it is true, by ingenious reasoning, but certainly not established on the foundation of facts and observation. The cutaneo-hepatic, and gastro and intestinal hepatic sympathy, and portal congestion figure prettily enough on paper; but in nature, the causes producing dysentery and cholera morbus do not always or even generally act through this circuitous round. Many attacks of such diseases are induced simply by errors of diet, irritating

primarily the alimentary canal; others are produced by atmospherical changes, checking the cutaneous secretion, giving a centripetal direction to the fluids, and the gastro-intestinal mucous membrane has its secretions and exhalations increased. Its pathological lesion may consist in phlogosis or irritation, and the liver have no connexion with the morbid chain, or only such as is secondary and consecutive. No doubt the derangement of the hepatic function constitutes a more prominent and important feature of such affections, occurring in tropical regions, where this function is habitually exaggerated, and rises to a more elevated pathological rank. In intratropical practice, therefore, the condition of the biliary function merits very special consideration, and the mercurial treatment of gastro-intestinal affections is more generally admissible. But in this climate, the liver cannot be shewn to have any agency in many cases of this kind, and *certainly* the mercurial practice may often be dispensed with. Dr. Johnson and others who have practised in India insist with much emphasis on the necessity of giving large doses of calomel in dysentery, and pushing it to the extent of inducing ptyalism in aggravated cases. What sober, discreet physician in this country, would think of imitating the practice? It is neither called for nor has it been found to be the most successful course of treatment: we have relieved many attacks of dysentery by other, milder and safer remedies, and castor oil and opium are all the medicines that are usually needful in this disease, and, assisted by mucilaginous drinks and proper dietetic regulations, will oftener succeed than the heroic mercurial treatment.

The design of the preceding remarks is neither to disparage mercurials nor to divest the liver of its due importance in disease; equally foreign would it be from our present

object, to designate all the pathological states in which calomel may be advantageously prescribed, or to investigate the extent of hepatic influence. Enough has been said to prove that calomel is not *always* indicated, or the liver *always* deranged in disease: and although it may appear to some that such self-evident truths should be stated as a proposition that cannot be gainsayed, rather than a corollary regularly deduced from premises; others, we apprehend, will require additional argument, before they can be prevailed on to abandon a theory and practice, which so greatly economises time and intellect. Physicians in abundance are known, who, having ample capacity for higher attainments, rest satisfied with *bilious* and *mercurial* exclusivism in medicine; who as regularly prescribe a dose of calomel whenever they are consulted, as they take their daily meals; whose pathology never penetrates deeper than the liver or ascends above the diaphragm. This is surely "a vulgar error" in medicine.

ART. III.—*On Creosote; A Thesis submitted to the Managers and Faculty of the Louisville Medical Institute for the Degree of Doctor of Medicine.* By JOSEPH M. BROOKS, A. M.

This article was discovered in the early part of the year 1830 by a German physician, M. Reichenbach. It was first found in pyroligneous acid and afterwards in the various kinds of tar. The name of this new remedy is derived from the Greek *kreas*, flesh, and *sodzo*, to preserve, from its efficacy in preserving animal matter. In the process which led to its discovery M. Reichenbach found that it deprived his fingers

of their cuticle, and he judged from this circumstance that it was the preserving principle of pyroligneous acid, and that it might also answer some important therapeutical purpose in the living body. And in his subsequent researches he was much pleased to find that his opinions were not ill-founded. The process for obtaining it is a very tedious and complicated one, and may be found in the appendix to Wood and Bache's Dispensatory. I shall therefore not give it, but will refer the reader there for an account of its preparation as well as of its chemical and physical properties, which are both numerous and interesting. I shall confine myself in this dissertation to the medicinal and therapeutical powers of creosote. When this new principle was first discovered, it was taken up by several of the faculty who instituted a variety of experiments to ascertain its physiological action, in order to be enabled to make a practical application of it to the cure of disease. And among those to whom the public is indebted for a knowledge of its curative powers and therapeutical properties, its distinguished discoverer stands not the least conspicuous. In his researches, he very soon ascertained and published to the world its most distinctive and characteristic properties. Creosote has been found to be the active agent in the water of Benelli, which enjoyed so great a reputation for many years in Italy, on account of its powers in arresting both internal and external hemorrhages. This preparation, from its virtues, was sometimes called the balsamic arterial water, and sometimes the water of Benelli, from the name of its discoverer. Physicians have long been acquainted with the virtues of pyroligneous acid, and are now tolerably well acquainted with the properties of the empyreumatic water of Dippel which has been but recently discovered. M. Reichenbach conjectured that these substances were equally dependent for their powers, upon the creosote they contained,

and upon making experiments with a view to ascertain that fact, found that his conjecture was well founded. The oil of tar, of which creosote is also the active principle, enjoyed for many years a colossal reputation, as a curative agent, both in Germany and France. It is stated in James' Dictionary of Medicine, that from tar a principle has been extracted which, from its great virtues, has been called the balm of pitch. This oil of tar, the Bishop of Cloyne thought was a preventive of small pox. He says that "this water preserves against small pox and all who drank it in time, escaped the contagion; that it cleared the voice, made healthy the constitution, exhilarated the spirits in cases of melancholy, and corrected the acrimony of the blood." It has also been stated by Boerhaave that scurvy causes putrid and malignant fevers, and also colic and pleurisy, and that the water of tar will cure scurvy; and *consequently* it will cure all the other diseases. Mr. Berkley recommended it to all sailors, said he looked upon it as a panacea, and if he could cause the human race to adopt a remedy by which he had cured so many thousands of individuals, he would care not what degree of ridicule should fall upon him, and as the ancient philosopher who cried from the house top to his fellow-citizens, "mind and bring up your children well;" I wish, said he, I was able to place myself sufficiently high, and had a voice strong enough to cry to all the infirm, drink the water of tar. M. Miquet of Paris says, "Berkley was not the first who extolled the virtues of the water of tar. The ancients, among whom may be mentioned Aretus, Cælius Aurelianus, &c., assigned to it analogous properties: "Astimaticas et purulentes adjuvat, said Galen, abstergendi vim habet, glutinendis vulneribus aptior." I do not however put much faith in these extravagant accounts of its efficacy in the cure and prevention of disease, but that the water of tar has some

curative powers in certain diseases I cannot doubt; and M. Reichenbach has proved that whatever virtue it has, depends upon the presence of creosote. May not the efficacy of the fumes of tar in certain diseases depend upon the same principle? Professor Eberle asserts that he has often seen great benefit derived from inhaling the fumes of tar in catarrhal consumption. The Baron of Verulam says, "in medicine, experience is the demonstration of demonstrations; it is the mother of systems and its works have always been the verification of principles;" therefore I will recur for a moment to some experiments which have been made with this substance, with a view to illustrate its physiological properties. When two drachms were given in half an ounce of water to a dog the following symptoms ensued: fixation of the eyes, drooping of the head, vertigo, complete prostration, the respiration was at first labored, but at the end of three minutes it was almost stopped by a secretion of viscid, tenacious mucus. Then followed vomiting of a milky fluid and spasmodic contraction of the abdominal muscles. These symptoms became gradually worse for two hours, the respiration more and more laborious, the limbs were seized with tremors and the whole ended in death. On making an examination after death, a strong odour of creosote was exhaled from all the tissues of the body except the liver. The mucous membrane of the intestinal canal was inflamed throughout its whole extent. The matters found in the stomach possessed the property of coagulating the white of an egg; and when heated gave out the peculiar smell of creosote. In the heart and the immediate large vessels, the blood was more firmly coagulated than usual—the lungs were engorged and the more ruddy parts of them readily floated in water. There was no sign of congestion of the brain. On injecting equal parts of creosote and water into the carotid artery of a dog

the same symptoms followed, but death ensued much more speedily. The signs of poisoning, then, by creosote are, the redness of the gastro-intestinal mucous membrane, the peculiar color and thickness of the blood, the contents of the stomach coagulating albumen, and more particularly the peculiar odour exhaled from every part of the body. M. Miquet says, "I threw into two ounces of water, holding in solution twelve drops of cresote, some flies, a spider and a little fish; they did not live more than two minutes after their immersion. This poisonous action is probably owing to the same property which causes creosote to preserve flesh from putrefaction, being the same which coagulates albumen. These animals perished no doubt from asphyxia, that is to say, by a suspension of the circulation; there was evident absorption of creosote by the respiratory organs and by the cutaneous system. However small the quantity absorbed, it was more than sufficient, considering the smallness of the animals, to diminish the liquidity of the blood, and to render it incompatible with the mechanism of circulation, and of course of respiration."

Having made various experiments with his new remedy and ascertained pretty well its powers, M. Reichenbach's first applications of it to the cure of disease, were made on slight burns, infantile excoriations and wounds. Afterwards, he was induced to try it in more severe cases of burns, such as those from hot irons and scalding fluids. He also used it in gangrene, consequent to extensive compound fracture of the legs, and in the various kinds of tetter, in scrofulous ulcers of the throat, toothache, in ulcerated white swelling of the knee of two years standing, in chancres and other syphilitic ulcers. In all these cases M. Reichenbach asserts, the remedy was effectual, and rapid in its operation. In a case of long-standing scrofulous ulceration of the throat,

with purulent discharge from the ears, the application of the ointment of creosote to the former, and the creosote water to the latter, put an end to both in three weeks. M. Reichenbach also administered it internally in several diseases, with decided benefit. In two cases of hemorrhage from the lungs, the sanguineous expectoration had continued for upwards of two weeks, when the administration of four drops of creosote on sugar daily, for four days, arrested the flow of blood entirely.

This substance has been extensively employed, in cases of burns, by several of the most celebrated French physicians, who are much pleased with the remedy; for, they assert that in treating these with creosote, the tendency to cicatrize from the circumference to the centre, and the consequent contractions and irregularities are avoided. It has also been used in tetters and old venereal ulcers by Costar, Martin Solon, Duparc, Davuergne, Kunckel, and Lepere; in sanious ulceration of the cervix uteri, by Columbat; in a cancerous ulceration of the nose, by Breschet; in chronic inflammation with suppuration of the eyelids, by Costar. 'Tis said M. Regnart, among other patients, relieved the celebrated Broussais from a most excruciating toothache, by the application of concentrated creosote to the carious tooth.

The powers of this article were very much overrated by the enthusiasm of those who first made an application of it to the cure of disease. Dr. Elliotson made a series of experiments with it in July, 1834, in St. Thomas' Hospital, and gave a very flattering account of its curative effects in several very obstinate diseases. He first tried it in epilepsy, in which disease he found its effects very tranquillizing; a few epileptic patients had milder fits, and at longer intervals.

Encouraged by this good effect, he was induced to try it in neuralgia, hysteria, and extreme nervousness. In this class of cases, he asserts, it frequently succeeded most admirably. In rheumatic neuralgia, Dr. Elliotson reports it a valuable remedy. He relates a case which I will give in his own words: "The first case of neuralgia, or what appeared so, occurred in a girl twelve years old, who after the influenza a year previously, had gradually become so costive, as to have an evacuation but once in three or four days, and then with great pain. In this condition, she was suddenly seized with spasm of the abdomen, twitchings of the superior and inferior extremities, and extreme agony in the lower part of the abdomen and pelvis. An attack of this kind frequently recurred, and at length came on every morning about seven or eight o'clock, and lasted till night, when she fell into a comatose state till towards morning. The pain was such that she sat, constantly moving backwards and forwards, wringing her hands or pressing the lower part of her abdomen; her face was expressive of intense suffering, and she was much reduced. At the time of her admission into the Hospital, she had made water but once in twenty-four hours for the last three months; the abdomen was very tense, but little swollen, and gave a hollow sound on percussion; the urinary and alvine discharges were of a healthy character, and the bladder on sounding, gave no indication of disease. Every known remedy likely to prove beneficial had been exhibited in the country. She was one of the most distressing objects I ever saw, and I utterly despaired of any improvement. Three gr. of muriate of morphia every morning, probably alleviated her sufferings, but so little that I discontinued it. I ordered a drop of creosote to be taken three times a day, and the dose was gradually increased to seven. She began to improve rapidly, and left the Hospital

perfectly well in a month from the time she commenced its use. In the mean time she had regained flesh, and every appearance of perfect health."

Dr. Elliotson next tried it in phthisis. He says he is well satisfied it is no cure for tubercular consumption, but adds, "where only a single ulcer or but a small number exist in the lungs, and there is no disposition to further deposition of tubercular matter, (a case I should think very hard to find,) it is very beneficial." "One young gentleman," he continues, "with a large solitary cavity in his left lung has entirely recovered, and not the slightest morbid condition is discoverable by the ear. In bronchorrhœa, or that state of the bronchial mucous membrane, which consists in a profuse secretion without inflammation, I have seen its inhalation of essential service. In one instance of this affection, where the expectoration was very offensive, the cure was very rapid. In asthma, dependent upon morbid excitability of the bronchial membrane, its inhalation is often useful. The peculiar excitability of nervous persons, Dr. Elliotson remarks, has been abated by the same remedy in a remarkable manner, but in this class of persons we are cautioned to administer it in very small doses, not more than half a drop, as more at first is very apt to produce excitement of the head. That species of palpitation arising from morbid excitability of the heart, is said to yield to it much more readily than to other remedies."

From all that has been published on the subject, there can be little doubt, that creosote is one of the most effectual remedies known, for obstinate or long-continued vomiting. But this remedy should not be used in cases where there is either inflammation or structural disease, for in the former it would do harm from its stimulating properties, and in the latter would aggravate the pain. Dr. Elliotson "knows no

other remedy to be compared with it in arresting vomiting." He asserts, that he has often seen it succeed after the failure of prussic acid, the most powerful remedy he was previously acquainted with in such cases. He tried it in one case of vomiting from pregnancy, with entire success. In the following extract will be seen the manner in which he uses it, and the kind of cases to which he applies it:

"One or two drops may be given every half hour or hour, till the vomiting ceases, and if a dose be rejected it should be immediately repeated. The first dose frequently succeeds. I could detail fifty cases of vomiting in the practice of myself and friends, and both in public institutions and private practice, illustrative of its powers in this respect. In colic and enteritis it arrests the vomiting long before the bowels are opened, and purgatives are thus retained which were all rejected previously to its exhibition. Even in a case of severe vomiting, apparently from arsenic, which generally excites inflammation of the stomach, I have known it succeed astonishingly, as well as in the only case of vomiting from pregnancy, in which I have had an opportunity of trying it. Of course as it subdues vomiting, its power is equally great over nausea—when properly given in nausea or vomiting, without inflammation or structural disease of the stomach, I have not yet known it fail, except in one remarkable case. A boy, fourteen years of age, had for two years instantly vomited whatever he took, without effort, and without any diseased condition to which it could be referred—he was rather weak, thin and pale, but otherwise in perfect health, except that he confessed being rather giddy, and had a habit of knitting his brows; symptoms which at length made me suspect the cause was in his head. Creosote, as far as it was tried, failed in him, though given in doses of three drops, so frequently in one day, as thirty times. I proposed

augmenting the dose, but he was unhappy at being from home and left the Hospital."

No one but the most determined sceptic as to all human testimony, can doubt of its efficacy from the positive manner in which Dr. Elliotson and others speak of it in this respect, and I am the more inclined to believe his statement from the circumstance of its being corroborated by one in our own country, who stands deservedly very high in the medical profession—I mean Dr. Eberle. I do not recollect whether or not he approved of it as an anti-emetic generally, but I recollect distinctly, that in his course of lectures before the class of the Medical College of Ohio, during the session of '36–7, he related a case of hæmatemesis, which he attended in consultation with Dr. Morehead, in which after all the usual remedies had failed, they succeeded very soon in arresting the vomiting by administering a few drops of creosote in solution. And here I am reminded of a case which fell under my own observation, while I was at the Louisville Marine Hospital, as resident student. This patient, a young woman about twenty-five or six years of age, came into the Hospital some time in July; she had had white swelling, but at this time had nearly recovered from it; at times she had nearly every symptom of hysteria; then again she would be attacked with a most excruciating pain in the lower part of the abdomen and thighs. She was but little reduced, and a person to look at the color of her cheek would have thought her in perfect health; her pulse varied but little from the natural standard; her bowels were habitually costive; her menstrual discharge very irregular. At times she would be seized with vomiting, which was generally soon relieved by some of the common remedies, such as morphine or the soda powder, or laudanum. But on one occasion after all these remedies had failed, the vomiting was

checked by administering two drops of creosote in half an ounce of water.

Dr. Roots, the physician to St. Thomas' Hospital, gave a clinical lecture in that institution in 1836, from which I make the following extract:

"I perfectly agree with Dr. Elliotson, that creosote is often of value in allaying irritability of the stomach, when perfectly independent of any inflammatory action. I am disposed on the whole to say, that creosote is entitled to hold the same rank in the Materia Medica, as a remedy in irritable conditions of the stomach, free from all inflammaotry action, as does the oxyd of bismuth. After having used it from the moment of its first introduction into this country, I have been able to do more with creosote in irritation of the stomach, than I have with the oxyd of bismuth."

Having ascertained that creosote would arrest vomiting, Dr. Elliotson next endeavored to learn whether it would not prevent other medicines from producing nausea or vomiting, and the results of his investigations are thus expressed: "I find it, by daily experience, even to surpass prussic acid in this particular. I have enabled the stomach to bear hydriodate of potassa, sulph. copper, sulph. of iron, and many druretics in much larger doses than those previously rejected. Just as I have seen it arrest vomiting where prussic acid had failed to do so, I have seen it enable the stomach to bear medicines when they had been rejected in spite of prussic acid."

Dr. Elliotson also alledges that he has tried it successfully in some cases of dyspepsia; but when we consider that this disease is generally dependent upon chronic inflammation of the mucous membrane of the stomach, or at least a morbid irritability nearly allied to inflammation, I cannot believe that it is a remedy likely to prove generally beneficial in that disease.

Indigestion, doubtless, sometimes arises from functional debility or mere muscular inactivity, independently of vascular irritation or inflammation, and in a case of this kind I have no doubt that creosote, from its stimulating properties, might sometimes be of service.

Whilst Dr. Elliotson was engaged in these experiments, the cholera broke out in the Hospital, and he was induced to try the tranquillizing powers of creosote in that "opprobrium medicorum." In the two cases in which he administered it, it had the effect only of checking the vomiting. This, however, led him to make further trials of its anti-emetic powers, and with what success may be learned from a reference to what I have said in a former part of this article.

The following extract is taken from some remarks of Dr. James Johnson, editor of the Medico Chirurgical Review, on this subject:

"Creosote has been employed by the French physicians in pulmonary phthisis, but from all I have read on this subject, the alledged successful cases are strained and should not be recorded as such. It has not been more successfully employed in several cases of chronic bronchitis by inhalation. My own experience of the effects of creosote is, as yet, confined to cases of scrofulous ulcers of the leg, toothache, lumbago and apthæ. In the first case of ulcers, I premised a seton in the arm, and the rapid desiccation of the ulcers caused by the creosote, had no ill consequences on the brain or any other viscus. In toothache, I have verified the reports of Dr. Elliotson: In the case of rheumatism I found the remedy at first produced distressing nausea, but the warm and copious sweat that ensued soon compensated for that symptom, and effectually removed the rheumatic pain: copious diuresis was also one of its effects. In a case of extensive apthous ulceration of the mouth occurring in an adult, I

employed the following wash with the greatest advantage; the sloughs came away after the second time of washing, and the depressions in the mucous membrane filled up with astonishing rapidity; several of the ulcerated surfaces were as large as half a sixpence:

℞. Creosote ʒ ss.
Gum Arabic Mucilage, ʒ iss.
Camphor mixture, ʒ xss.,—mix and wash the mouth every two hours."

Among the English practitioners, Dr Copland was the first to use creosote as a remedial agent. He tells us he has used it in cachectic affections as a tonic, and also in dropsical cases where it proved diuretic. In two cases of diabetes, he thinks he was not allowed to make a fair trial of it. In porrigo favosa, he has used a lotion of a saturated solution of creosote with good effect. Dr. Elliotson also tried it in diabetes; he was led to do so from accidentally having read of a case in which it had been used with benefit. He relates the following cases:

"On the 13th of August, I was requested to see a gentleman from the country about sixty years of age, plethoric, with a full pulse; his mind was dull, and he had suffered two attacks of paralysis; his tongue was very yellow, and black at the centre towards the root. He told me his disease was extreme thirst, so that he was drinking all day and was enraged if drinks were not taken to him the moment he called for them. He said he had been ill four or five years, was much worse always in autumn, much better in spring. He passed but four pints of urine according to his own account, but confessed that he made water twelve times a day and three times in the night. I found it contained a large quantity of sugar. I ordered him creosote. I saw him again on the 10th September, when he was making water but six times in

the day and once in the night. It contained scarcely any sugar; his tongue was clean, and he told me he felt perfectly well in every respect. The quantity of urine I could not ascertain.

Case II. A medical man, ill eight months, made twelve quarts of urine of sp. gr. 1038 per day—stomach excessively acid, bowels costive. He took creosote. November 25th, spirits, strength and general health greatly improved, and his amendment altogether surprising.

Case III. A gentleman of sixty, ill six months, making six quarts of urine in twenty-four hours of sp. gr. 1037, took creosote; nine days after seen again, his health much improved. In December his thirst had disappeared, his urine came down to three pints, with proportional general amendment, but the urine still of sp. gr. 1037. He has since been heard of, and continues to improve."

If these cases are faithfully related (and I believe it is generally conceded that Dr. E. is a man of veracity,) we must confess it is about as successful a treatment, as is generally found in that very obstinate disease. Dr. Eberle states in his practice that "the prognosis in this disease is always unfavorable; few comparatively recover from its attack, and the cure under the most favorable circumstances, is always tedious and difficult. I have seen but one case of recovery, out of six that have come under my care. Cullen and Currie state that they never knew a single instance of this disease having yielded to remediate management, and the celebrated Frank succeeded in only two out of ten cases which he treated. Many other physicians have nevertheless been more fortunate in their treatment of the disease, and although it is certainly exceedingly difficult to cure this malady, it is not quite so intractable as Cullen was led to believe. The plans of treatment in this disease are as various and discre-

pant as the notions which have been advanced concerning its pathology. A vast number of remedies have been mentioned as having been used with success in this malady, but as they have been generally introduced upon vague and hypothetical grounds, or adopted in a purely empirical manner, there are but few of them which appear now to deserve any attention."

Since then, the treatment of this diaease has ever been empirical and its pathology not truly known, we should lend a listening ear to any new mode of treatment which promises the most remote chance of success. Let creosote, then, be effectually tried in so destructive and unmanageable a disease.

There was a very interesting article on the employment of creosote and tar-water in pulmonary affections, published by M. Petregrim, in the Gazette Medicale de Paris,for November, 1838. The editor of the Medico Chirurgical Review, in commenting upon that article, gives the following account of the results: "The exhibition of these remedies was confined to three sets of cases, chronic bronchitis, incipient phthisis and confirmed phthisis, and a certain number of each class was treated with creosote and others with tar water, and the comparative results carefully noted. The usual effects produced, were a sense of heat in the oesophagus, stomach and intestines; and vomiting. In two cases where diarrhœa existed, it appeared to exert a beneficial effect, by rendering the discharges fewer, and, in one case, after each dose and accompanying the sense of heat in the stomach, there were rapid alterations in the capillary circulation, with a sense of tingling in the limbs. In seven out of the fifteen cases, the cough and expectoration seemed to be lessened, but, in two, the irritation increased and the cough became more frequent. Upon the whole, M. P. has found creosote more useful in incipient than in confirmed phthisis, and in no case has he

seen anything like the radical cure announced by some. He concludes that it is only occasionally useful for the purpose of alleviation; and decidedly gives the preference to tar water as a therapeutical agent. In one case, where the creosote produced great irritation and rendered the cough worse and attended with vomiting, the tar water had quite a different effect. After ten doses the cough and dyspnoea became less, expectoration diminished, the pains in the chest were relieved, the nausea and vomiting vanished, and he went home well. The creosote *usually* facilitated expectoration, whereas the tar water *always* did so without producing any of the unpleasant effects of the former. The creosote sometimes alleviated the cough and at others appeared to exert no influence, and, in two cases, rendered it more severe; on the contrary, the tar water constantly alleviated it in a most striking manner. The thoracic pains and sense of oppression frequently diminished by the creosote, but the alleviation with the tar water was constant. As regards affections of the chest, tar water certainly appears to be far preferable to creosote, and in its effects upon other parts of the system, the comparison is equally in its favor. The heat and irritation of the digestive tube, the disgust and vomiting which were frequent attendants on the action of creosote, did not occur on the exhibition of tar water; indeed it rather appeared to check vomiting. Tar water frequently increased the appetite, rendering digestion more easy; no such effects were noted as regards creosote. Tar water seemed to exert no appreciable inflnence upon the urinary secretion."

One thing in the above extract which strikes us as extraordinary, is the smallness of the dose, which, in M. P's hands, produced nausea, and heat in the oesophagus, pharynx and stomach. In the fifteen cases given, we find only five in which it reached five drops, whereas, in the remainder,

these unpleasant effects were produced, when the dose was only two drops. Dr. Elliotson states that many patients bore a gradual increase to ten or twenty drops without unpleasant effects, and, indeed, in one case the dose was gradually augmented to forty drops.

Dr. Cormack has written a very interesting pamphlet on the subject of creosote, in which he states that, in some cases, it acts as a sedative and anodyne. To produce such effects he gave it in diseases of the heart, pulmonary complaints, and vomiting; he also used it to allay the pain of cancer. He mentions a patient of Dr. Short's in the Royal Infirmary, afflicted with cancer of the stomach, who experienced entire relief from pain in ten minutes after having taken a dose of fifteen drops. He says, "when its sedative or anodyne action is wished speedily, the object is best attained by inhaling its vapours. When it is given in small and gradually increased doses it acts as a tonic. In general it does not affect the bowels; but in two cases in which Dr. Short pushed its use to considerable extent, diarrhœa and in one case decided dysentery were produced. It sometimes acts upon the kidneys, but its effects in this respect are rather capricious." He says creosote has been known to arrest hemorrhage even from large vessels, but this in my estimation, to use a homespun phrase, is rather stretching the blanket. Whilst at the Louisville Marine Hospital last summer, (1837) I saw it used with the most prompt success in several cases of hemorrhage from small vessels, and in one case in which the posterior temporal artery was divided, Dr. ——— having made an unsuccessful attempt to dissect it up and put a ligature on it, was induced at the suggestion of one of the resident students to try the creosote. Three or four drops being put upon a sponge, which was placed between the divided ends of the artery, succeeded in stopping the hemorrhage in less than ten min-

utes. I agree with Dr. Cormack when he says it proves useful where leech bites are troublesome, but I cannot agree with him when he asserts that "it will arrest hemorrhage even from large vessels."

M. Miquet, of Paris, gives several cases illustrative of the power of creosote over hemorrhage, two or three of which I here transcribe. "Having cut off the tail of a cat, much hemorrhage ensued during eight or ten minutes. Desirous to know if the discharge would stop of itself, I did nothing for some time to suppress it; at last on going to apply some drops of creosote, I found the blood in place of exuding from minute vessels, formed a jet like bleeding from the arm; the creosote was not sufficiently powerful, while the jet continued, to arrest it. I interrupted it for some seconds by light pressure on the tail, which was dipped into creosote; in a few minutes the hemorrhage was suppressed and did not again return."

Case II. A child twelve years of age, in presence of whom I expressed a desire to see a cut for the purpose of arresting the flow of blood, made in an instant an incision on the index finger at least three lines in length, which he presented to me with a proud and courageous air. Two drops of creosote suppressed immediately the hemorrhage; after five minutes the edges of the wound were joined so that the trace of the cut could scarcely be seen.

Case III. I cut the two ears from a dog, and treated them comparatively with the water of creosote and common water; the creosote still showed in this case its hæmostatic properties: the fresh water produced no effect."

Might not creosote, from its property of coagulating the blood, prove a valuable remedy in uterine hemorrhage? That most powerful remedy, the tampon, to which accoucheurs often resort with confidence of success, after every other expedient

has failed, acts by retaining the blood in the vagina and uterus, and thus causing it to coagulate. That it will arrest capillary hemorrhage and that proceeding from incised wounds, where there are no large vessels divided, is well established, and that it may prove a valuable remedy in this most obstinate and dangerous affection, I think highly probable. If I should ever have a case of it, I should be strongly tempted to try an injection of a weak solution of creosote, at least after having failed to arrest the discharge by the common remedies. In a case of pregnancy where abortion was inevitable, and from profuse hemorrhage the uterus was unable or indisposed to act, I think this remedy would be particularly applicable. An injection of creosote water in this case would act in two ways; whilst from its stimulating qualities it would gently excite the uterus to take on tonic contraction, and thus enable it to expel the ovum; it would at the same time coagulate the blood, and thus restrain the hemorrhage. And I am not a little astonished to find in all I have read on the subject of creosote, that it has never been used or even suggested in this affection, for which its well known property of coagulating the blood, would seem so peculiarly to adapt it. If this does not prove to be a valuable remedy in uterine hemorrhage, I shall hereafter be disposed to say we should never receive any thing on theoretical principles, but look to experience alone for all our knowledge in medicine.

I have been informed by a physician now residing at the Louisville Marine Hespital, that he has used a solution of creosote in mercurial ptyalism, with the most happy effect. He regards it as a valuable remedy in that troublesome affection; he has relieved several severe cases in a few days, by causing them to make use of a weak solution of this article as a gargle. I have seen this remedy used internally, in but

few cases, but I have seen it used repeatedly as an external application, with a solution of fifteen or twenty drops to the ounce of water. I have aroused to action indolent ulcers, upon which the nit. of silver, the red precipitate ointment and a pretty strong solution of nit. acid seemed to make no impression.

Last spring I boarded with Mr. H————, a brick-maker in the vicinity of Louisville, who worked about sixty hands. He made me *Surgeon General* to the brick-yard, and among a variety of other cases which fell under my care, were several ulcers of the lower extremities—I resolved here to give this new remedy a fair trial. There was one case of a negro man who had an ulcer on the external part of the right leg, about midway between the knee and ankle joints; this was a very unsightly and offensive ulcer of the size of the palm of my hand, and was of two years standing. He said it originated from a burn. This leg was considerably swollen and consequently larger than the other. The ulcer was entirely cured in six weeks, by the application of an ointment made of simple cerate and creosote, in the proportion of an ounce of the former to fifteen drops of the latter, together with the bandage and an occasional dose of Cooke's pill or blue mass. I used it in several other cases whilst I resided here, both in the form of ointment and solution. I tried it in several similar cases, with a view to ascertain its relative efficacy when used in the forms of solution and ointment. In the case of a negro man, who had an ulcer on each leg of very much the same size and appearance, I used the ointment of creosote to one, and the solution of the strength of fifteen drops to the ounce, to the other. The former improved much more rapidly than the latter, and got well first. I shall conclude by expressing the conviction that creosote will be found a valuable addition to the Materia Medica.

REVIEWS.

A Treatise on the functional and organic diseases of the Uterus; from the French of F. Duparcque, Docteur en Medicine de la Faculte, et ancien interne des Hopitaux et Hospices civils de Paris, &c. &c., Translated, with notes, by Joseph Warrington, M. D. *of Philadelphia.* Philadelphia, Desilver, Thomas, & Co., 1837.

The diseases of the female sexual organs have shared largely in the benefits of the improved methods of investigation which distinguish the modern pathology, and confer upon it the characters of certainty, accuracy and precision, so refreshing to the inquirer, anxiously seeking tangible, practical truths, but permitted hitherto only such glimpses, as the *ratio symptomatorum* affords. For a long time, diseases were studied only by the symptoms exhibited, and on the same basis were erected the various systems of Nosology. Symptoms were regarded as corporeal parts, whose exact discrimination was as essential to the identification of the disease, as the properties of plants and animals to fix their rank in the classical order, genus and species to which they belong. But diseases are not essential entities—have no individual existence, and consequently are not stamped with fixed and immutable lineaments, which may serve to distinguish each from every other, and secure it its place in any classification that can be devised. Boerhaave, as we are informed by his commentator, collected from all authors, with incredible pains, the *symptoms* which they had observed in the different varieties of fever described by them. His object was an analysis

to ascertain the symptoms which are essential to fever, and in order to this, he expunged from his catalogue such as did not appear in all fevers. Finding himself obliged to exclude one after another, his surprise was great to discover the list so much curtailed; it being ultimately reduced to three, viz., *shivering*, *frequent pulse*, *heat*. And the expurging process ought in truth to have been carried farther; for, there is not one of those retained, that may not be absent in fever, and in a great number of cases, their combination is not present.

But the fallacy of studying and diagnosticating diseases by the symptoms, only, is never more manifest than when the method is applied to those of the uterus. Uterine affections, of divers and opposite nature, give rise to trains of symptoms so similar, that whoever relies on their evidence alone, must be perpetually led into serious errors. To instance only one symptom, viz., sanguineous discharge; this may proceed from functional or organic disease of the uterus; if functional, it may be produced by different vital modifications; if organic, it may be the consequence of a morbid alteration of the structure of the organ, or of polypi or other tumors growing from it. Seeing the diversity of conditions which may give rise to this symptom, it is evident that a diagnosis founded upon it must be exceedingly exceptionable; still more uncertain and empirical must be the practice, which erects this symptom into a disease, and directs its remedial measures exclusively to it. Yet, is it not common in this country, to consider and treat all morbid sanguineous discharges from the uterus, unconnected with gestation, as menorrhagia? While it must be admitted that sanguineous discharges take place from the uterus, which may, with sufficient propriety, be considered as essential hemorrhages, and against which our principal therapeutic measures are to be directed, it should not be forgotten that in a large proportion of cases, the discharge

is not the disease, and its suppression would in nowise better the condition of the patient. Other illustrations of the fallacy of symptoms in uterine diseases might be given; but contenting ourselves, at present, with the one referred to, we proceed to notice the auxiliary means of diagnosis, whose more frequent employment has shed so much light on this interesting class of maladies. These may be denominated the sensible signs, and are obtained by several methods of exploration, the design of which is to learn the state of the uterine organs through the medium of impressions made on the senses. The senses employed in this examination are the *touch* and *sight;* the former commonly sufficing to give us information regarding the alterations of volume, consistence, sensibility, situation, &c., of the uterus, which can be but very imperfectly gathered from the symptoms alone; the latter disclosing alterations of coloration, solutions of continuity from ulceration, &c. The uterus is accessible to the touch in exploration in three different ways, viz., per vaginam, per rectum and through the hypogastrium; from all of which the French physicians have derived more important advantages, than those of any other nation, because they are more in the habit of practising them. In this country, it must be admitted by all who are at all conversant with the state of medical practice, physicians very generally neglect these methods of investigation, and hence the treatment of uterine diseases, functional and organic, *is essentially empirical.* This declaration is not slightly or censoriously hazarded, and however it may be excepted to at first, we are persuaded that all candid practitioners, upon deliberate reflection, will subscribe to its justness. Consulted, for example, on account of vaginal discharge of a leucorrhœal character, how many physicians are in the habit of making the examination necessary to discriminate whether it is flux merely, or proceeds

from inflammation, ulceration, or the irritation consequent to displacement of the uterus? And how many, in the case supposed, are not in the daily practice of prescribing the same treatment, unmindful of the pathological lesion with which the discharge is connected?

The work of Dr. Duparcque, which it is our object to introduce to our readers, will prove of inestimable value, should it serve no other purpose than to render practitioners dissatisfied with superficial views and random treatment, in the frequently occurring diseases which it is its object to elucidate. The product, moreover, of the most favorable opportunities for observation, diligently improved, it must be highly prized on account of the facts it records, and the practical inferences deduced from them. The work before us was elicited by the following question proposed for the subject of a prize by the Medical Society of Bordeaux—"To establish the distinctive characters of divers engorgements, of ulcerations of the neck and body of the uterus; to exhibit the methods of treatment, which agree best with each of them, and to determine the cases which require the extirpation of the diseased parts"—and the commission, appointed by the Society, decreed the whole prize to its author.

The treatise of Dr. D. is divided into two parts. Before attempting the direct solution of the question propounded, which is the object of the second part, in the first, the general anatomy of the uterus is adverted to; its functional derangements, which may end in engorgements or permanent lesions, are brought under notice, and the necessity of obtaining *sensible* evidence of its condition insisted on. To a superficial observer it might appear that the uterus, in its unimpregnated state, is too diminutive an organ to exercise a potent influence over the economy, and too simple in its organization to be the seat of any considerable diversity of

disease. But on closer examination it will be found that its sympathies are both numerous and important, and its structure so complex as to include all the fundamental tissues, peculiar to animal organization. Thus, it is invested with a *serous* membrane, derived from the peritoneum, a *cellular tissue*, connecting this with a *cellulo-fibrous* or muscular tissue, in which are imbedded numerous *blood vessels* and *lymphatics*, and *nerves* supplied from the ganglionic and cerebro-spinal system, and finally it is lined by a *mucous* membrane. All these tissues are susceptible of great normal expansion from gestation, and their adaptedness for this may be regarded as a real predisposition to great pathological lesions. Hence the "uterus may not only suffer all the maladies with which each of the tissues is susceptible of being especially affected, and which are common to each of the organic systems," as Dr. D. remarks, but it is so prone to entertain them, so to speak, as to present specimens of all in their greatest intensity.

The first functional aberration noticed by Dr. D., is the default of menstruation at the approach of puberty, notwithstanding the distinct establishment of the menstrual molimen. The existence of the menstrual movement is declared by a sense of heaviness in the hypogastrium, more or less severe uterine pains, alternate chills and flushes, headache, difficult respiration, and sometimes hysteric fits;—all, evincive of a congested condition of the uterus,—of a nisus to bring on the discharge, and yet, after the lapse of a few hours or days, these symptoms pass away without any discharge appearing. This menstrual congestion may be repeated several times, at the usual intervals, before the exhalant vessels are prepared to emit the sanguineous discharge. Dr. D. ascribes the discharge to the increased permeability of the vessels, which permits them to disgorge themselves. We

shall not stop to find fault with theoretical expositions, but take this opportunity to declare our own belief that the non-appearance of the discharge is to be ascribed to the want of relation between the sensibility of the exhalants and the *blood* which they are required to transmit, and this want of relation may proceed from the menstrual molimen being either excessive or defective. We have said *blood* in plain terms to express our opinion that the menstrual discharge is neither more nor less than blood—an opinion which we do not intend, in this place, to defend, but which it was necessary to announce, lest we should be accused of negligent inaccuracy, whenever we employ the terms *menstrual blood*, *menstrual discharge*, *&c.*, synonymously.

Whatever doctrine may be held with regard to the final cause or use of menstruation, no doubt can be entertained that the immediate effect of the discharge is to disgorge the congested capillary vessels of the uterus, and thus to relieve uterine irritation and prevent the occurrence of inflammation. From this view it is evident that should periodical congestion continue to be formed, without sanguineous menstrual depletion to abate it, there is risk of mischief. This is what actually befalls certain females.

"In some girls, however," Dr. Duparcque remarks, "this state of things continues through an indefinite period; the congestion of the uterus does not completely pass off after each period, but becomes increased, the local and general disturbance acquires intensity, and medical aid is required to prevent the dangerous consequences of this morbid state." p. 23.

When the congestion becomes persistent, a nucleus is formed which receives accessions from every recurring menstrual movement, and the uterine tissues become the seat of engorgement. Here a barrier will be formed to the irruption of the menses, of a nature totally different from what exists from original deficient uterine and constitutional

vigour, and it is of the utmost consequence to distinguish these opposite conditions in practice. As far as discharge goes, they are the same; there is equally amenorrhœa in both cases, but the first will demand depletory and the last tonic treatment. In amenorrhœa from uterine and constitutional inertia there is little or no local complaint, the menstrual movement is feebly or not at all exerted; in amenorrhœa connected with engorgement, there is severe pain in the loins and hypogastrium, sense of fulness and weight in the pelvis, and the pains may be as excruciating as in dysmenorrhœa,—sometimes it is, indeed, dysmenorrhœa; for, discharge is not essential to constitute dysmenorrhœa.

Judging from our own observation we would say that amenorrhœa emansionis, or retention of the menses, is much more frequently associated with uterine torpor than congestion, and consequently much more frequently requires tonic and aperient than antiphlogistic treatment. Our author, indeed, gives us but one case of *original* amenorrhœa, in which there was engorgement, and even this case is not altogether satisfactory, inasmuch as the failure of treatment rendered it probable that there was defective organization of the exhalent surface of the uterus.

But when menstruation has been regularly established, and experiences sudden suppression from any adequate cause, such as violent mental emotion, the application of cold, &c., the immediate consequence is very generally congestion, sometimes inflammation of the uterus, which, augmenting at each returning menstrual period, ends in engorgement.

"The engorgements of the uterus may under these circumstances," observes Dr. D., "take on the form of simple congestion, of acute, and particularly chronic inflammation, which may successively or simultaneously pass through all the stages of suppuration, or cartilaginous or osseous degenerations. Restricted in the degree of its action, this engorgement be-

comes the basis of cancerous formations in the course of some years." p. 24.

It is essential to rational and successful practice that such pathological condition of the uterus be detected when it exists, as it will require directly opposite treatment from that which is applicable to amenorrhœa from uterine torpor; and, as we doubt whether care is taken to make the discrimination by the great body of the profession in this country, we feel warranted in illustrating it by a case or two from our author. Dr. Duparcque expresses the opinion, in which we entirely concur, that amenorrhœa depends upon engorgement much more frequently than is generally believed, and in all such cases stimulating emenagogues, antispasmodics, connubial excitation, &c., so often injudiciously recommended, cannot fail greatly to exacerbate the complaint. On the other hand, if correct views are received, and the treatment based upon them, bloodletting, purging, hip-baths, regimen, diet, &c., is vigorously pursued, we may effect very prompt resolution of the engorgement and restoration of the menstrual function.

"Adele B. at the age of 18, having the catamenia in abundance, slipped down a stair-case while carrying a bucket of cold water; this was in the first day of her monthly period, in which there was commonly an abundant discharge, lasting four or five days. The fright caused by the fall and the splashing of the cold water with which she was inundated, suddenly arrested the discharge, and she was almost immediately seized with dull pains in the hypogastrium, as well as by rigors and dyspnœa. She however continued her occupation as a domestic, though during the day, the pains in her loins became so severe, that she was frequently obliged to sit down. The breasts began to augment in volume and consistence; anorexia and capriciousness of appetite followed, as in pregnancy.

At the three succeeding menstrual periods, she was obliged by the severity of the pains, to keep her bed; the breasts became flaccid, and the body emaciated, and the appetite completely lost. The patient experienced an insupportable

tension and weight in the pelvis, particularly after she had been standing some time, or walking a little.

"When the fourth menstrual period arrived, I bled her 16 oz., and prescribed for her a bath of 29 deg. R. Next day, there was a discharge of a dark liquid per vaginam; it looked as though it had been squeezed out of the uterus, and was attended by a sort of tenesmus of that organ. This imperfect menstruation continued four days. The pains were so acute that she could not avoid shrieking, either when still or in motion. She had headache, fever, extreme sensibility of the hypogastrium, with constipated bowels. I directed 25 leeches to the abdomen; instead of applying them, however, the attendants kept the hypogastrium covered with emollient fomentations. Appearing to be somewhat better through the night, and the abdomen rather less tense and painful, I continued the fomentations and repose. Three baths were successively taken, and every thing went on in good order: at the next period, the menses occurred spontaneously and abundantly; and the uterus has continued to perform its function since." p. 27.

We give another case, in which metritis evidently succeeded to suppression of the menses; the case is worthy attentive perusal, as well on account of the diagnostic details as the rational and successful treatment pursued.

"A beautiful Jewess, 15 years old, had menstruated regularly for some months; at each period, violent pains in the hypogastrium preceded the discharge, and disappeared when it was established; it generally continued pretty freely for five or six days. This state of things existed on the 12th of April, 1824, when she was suddenly frightened by an explosion in an adjoining chamber; an icy coldness pervaded her body, and was soon followed by a violent agitation. Pains in the abdomen became very intense, and gradually disappeared without the irruption of the menses. The pains were doubly severe at the following period, from the 8th to the 12th of May, and subsided less completely than before. The menses did not re-appear.

"The emaciation of her person, and the alteration in the color of her features, the loss of her appetite, the impossibility of walking or standing, without inclining very much forward, and frequent attacks of sickness of the stomach, induced her father to call in Dr. Godechaux. The patient endeavored to conceal her situation as much as possible. The Doctor prescribed ten leeches to the thighs and laxative ene-

mata, for which latter she substituted laxative pills and drinks, which the stomach rejected. Her situation becoming alarming, I was desired to see her in consultation on the 31st of August; with some difficulty, I compromised with her modesty, and succeeded in placing my hand over the abdomen, and was soon convinced that the malady was to be found within it. I at first felt behind the pubes and in the hypogastric region a tumour, a little inclined towards the right iliac fossa, exhibiting by its position, form and volume, a tumour about as much developed as at three and a half months of pregnancy: it was very hard and sensitive; the slightest degree of pressure upon it was painful. In the left iliac region, there was another oblong nipple-like tumour, dipping deeply into the pelvis. I first suspected the patient was pregnant, and her great reluctance in submitting to an examination, seemed to confirm that suspicion. Finding it difficult to pass my finger into the vagina, I attempted to ascertain the condition of the parts by an exploration through the rectum; this however, was so blocked up by hardened fœces, that a complete examination was impossible. Her pulse was frequent and hard, skin dry and hot, mouth parched, tongue deep red.

"She was bled sixteen oz. from the arm: the stercoral matters were extracted from the rectum by a spoon handle. Being alarmed by our representation of her dangerous situation, she submitted to our prescription readily. After having cleared the lower bowels of the mechanical obstruction, we administered an ounce of castor-oil, which gave her some colic-like pains, but evacuated a large quantity of fœcal matter from the bowels.

"1st September.—The abdomen yielding; the tumour in the left iliac region not now to be felt; that in the hypogastrium was not diminished; it had fallen under the median line of the abdomen and sunk into the pelvis.

"By the introduction of the finger into the anus, and applying the whole of the other hand upon the hypogastrium, I felt assured that the tumour was a developed uterus. This could not be pregnancy, because the external parts were in such condition as to prevent ingress; it was not probably retained menses from occlusion of the os tincæ, because she had already menstruated. I therefore concluded that this increase of volume of the uterus, was occasioned by an engorgement of its tissue, and consisted in an inflammation, which though chronic at first, had become acute; this idea received some confirmation from the fact of the pain and great sensibility of the uterus under pressure.

"With this view, we had her bled twelve oz., and next day

had twenty leeches applied to the hypogastrium, which was kept constantly covered with emmolient cataplasms. She was also directed to use the bath and laxative drinks. I did not see her again until the 5th of September, when the tumour scarcely rose above the pubes, and she was free from fever or nausea. The pains had very much abated. Apply twelve leeches, continue the other remedies, allowing her skimmed milk and light broths, if she would relish them.

"15th.—The tumour could scarcely be felt by pressing through the abdominal parietes towards the sacrum. In the evening she felt some pain in the lower part of the body, and during the night there was a slight appearance of the menses. In a month from this time, she was able to be about without inconvenience. On the 10th of October, the catamenia returned with their usual freedom, and she has subsequently enjoyed good health." p. 32

The cases which we have quoted present good pictures of the uterine engorgement, that often remains as a consequence of suppressed menstruation; we say *often*, because we do not believe that it necessarily or invariably results. In some, perhaps in most instances, the congestion consequent to suppression is after a time dissipated, and the uterus sinks into a state of simple inertia. Chronic amenorrhœa is induced, marked by the feebleness or absence of menstrual molimen, and the constitution ultimately suffers as in chlorosis. Such cases are best treated by invigorating remedies, chalybeates, aloetics, &c.

We have dwelt on deranged menstruation as a cause of uterine engorgement, as long as our time or space will justify, and proceed to notice cursorily other causes, capable of producing the same pathological lesion. Forced celibacy, masturbation, and coition are mentioned by our author as causes of engorgements of the uterus. His explanation of the modus operandi of the first is not very satisfactory, nor do we very clearly perceive how it can act in the manner described.

"Forced celibacy," says he, "by depriving the genital

organs of a necessary stimulant may throw the uterus into a state of inertia, which deprives it of the power of relieving itself by a sufficient discharge of the fluids which cause the menstrual movement, and thus congestions, and more or less slowly progressive engorgements, follow." p. 40.

We suppose that if the uterus be too inert to relieve itself by the induction of discharge, the inertia will proportionally invite less blood to the organ; and would rather attribute the morbid effects of forced celibacy to the *excitement* of unappeased sexual passion. Masturbation and coition act in the same manner; and where there is great disproportion between the copulative organs, the os uteri may suffer mechanical injury, or contusion, of which our author and other writers speak. But, as Dr. D. very justly remarks, "the greatest number of the diseases of the genital organs, and particularly of the chronic diseases of the parenchyma of the uterus, originate in the consequences of conception."

The uterus undergoes the most striking changes during gravidity; its bloodvessels are increased in calibre and extension, its lymphatics are enlarged; in the bed of its proper tissue muscular fibres are deposited in regular layers; in a word, there is a real hypertrophy of the organ, to support which, augmented circulation and innervation are required. This rapid growth and physiological activity create actual predisposition to disease, and it is only surprising that this is not oftener awakened. The accidents of pregnancy are frequently the causes of uterine engorgements or inflammation. Among these, as the most operative, may be mentioned abortion. Concerning this our author makes the following declaration from multiplied experience:

"It frequently happens that the first abortion is succeeded for a long time, or perpetually, by a difficulty in menstruation and a consecutive sterility. Numerous cases have proved to us that these functional disturbances result from a chronic inflammatory engorgement, of the uterus or of its neck only,

which is susceptible of cure. Some cases of uterine cancer, not observed till after the cessation of the menses, have proved to us, that these diseases took their origin in a first and only abortion, after which the menstrual function had been disordered, and the women subjected to more or less severe, protracted and constant pains in the loins, &c.;—all symptoms denoting a morbid state of the uterus." p. 42.

Dr. Duparcque supposes that abortion is owing to the uterus refusing to expand in proportion as the development of the ovum demands, and that irritation is excited in its parietes by its being distended beyond its inherent expansibility. However this may be, abortion exacts the premature exercise of the muscular apparatus of the uterus, which, we may suppose, cannot act precociously unless very powerfully and unsafely goaded. Whatever explanation may be offered, all experience proves that abortion is a very serious casualty, and many women date from it the commencement of a long train of infirmities, which cling to them during the remainder of life. Perhaps, as our author intimates, the greater liability to consecutive disease after abortion than parturition at term, is partly referrible to the greater neglect of hygienic and therapeutic precautions, and the more speedy, and too early resumption of connubial duties.

Premature labor, also, as an accident of gestation, is to be looked upon as a cause of uterine disease. The explanation is to be found in similar principles to those already adverted to; the cervix not having completed the changes necessary to the easy transit of the fœtus, is liable to more contusion and irritation than at full term. The risk of mischief to this portion of the uterus will be greatly increased, if manual or instrumental assistance be necessary in the management of the labor.

Dr. Duparcque details the various accidents of labor at term, which may give rise to uterine irritation and congestion; but these are so familiar to the obstetrical reader, it is

scarcely worth while to allude to them. But what we regard as a very fruitful source of uterine disease, viz., the puerperal state, together with disregard of puerperal hygiene, is so pointedly presented by Dr. Duparcque, that we cannot refrain from quoting his remarks.

"Even the most favorable accouchment, leaves the uterus in a state of engorgement, which is either dissipated by a determination of the fluids towards the mammæ for the purposes of lactation, or else resolved in the course of the first nine days after delivery, though it may require a longer time if the uterus have been fatigued. If the woman rides, fatigues herself in any way, permits conjugal embraces, takes cold, or exposes herself to the excitement of any moral causes before the resolution of this congestion is completed, it remains the nucleus of an engorgement which may gradually increase and sooner or later become the origin or focus of the most profound alterations. A circumstance of much importance and of which practitioners should not lose sight, is here presented. The uterus remaining engorged for a greater or less length of time after accouchment, necessarily acquires an excess of weight which tends to depress it towards the vulva and cause prolapsus uteri. This precipitation is favoured by the relaxation of the vagina and ligaments of the uterus, as well as the yielding of the cellular tissue of the pelvis, in consequence of pregnancy and parturition." p. 44.

Premature rising and return to customary habits of exercise, diet, &c. tends to counteract the regular disgorgement of the uterus and reduction to its healthy volume and weight, while it will endanger prolapsion, as well on account of the gravity of the organ as the powerless state of its suspensory ligaments. We knew a lady who, in two of her confinements, suffered procidentia of the uterus from prematurely rising and the exertion necessary to maintain an erect position for a short time. Of course the proper remedy for prolapsus, under such circumstances, is ***strict confinement to a horizontal position***, until resolution of the engorgement has taken place, and the uterine ligaments have acquired their proper tone. No well instructed practitioner would think of

applying a pessary which could not be borne, on account of the excited and sensitive state of the parts: notwithstanding, Dr. D. assures us he has very frequently seen this unfortunate mistake committed by physicians of great celebrity, and become the source of serious consequences. Engorgement of the uterus either in puerperio or independent of gestation and parturition, may undoubtedly produce its prolapsion; but we differ from our author, if he maintains, as we understand him to do, that relaxation of the ligaments plays a *secondary* part in the etiology of prolapsus generally, and that it arises more from increase of weight in the organ, in consequence of engorgement. This view, he alleges, is confirmed by the following circumstances:

"1st. The greatest number of engorgements of the uterus, tend ultimately to produce its descent in the vagina, and even its escape from the vulva. 2nd. This displacement occurs in women who are afflicted with engorgements of the uterus, even though they have never conceived. 3d. In cases of the co-existence of descent with an engorgement, the resolution of the latter, effects the disappearance of the former." p. 46.

From a number of examples of prolapsus in consequence of engorgement of the uterus in women, who had never been impregnated, he cites the following:

"Miss C——, of a nervous temperament, and crossed in her early affections, experienced all the symptoms indicating a congestive engorgement of the uterus. She became married, and suffered intolerable pains from sexual intercourse; she even had severe hysteric fits from it. After a superficial examination of her case, all her sufferings were ascribed to a prolapse of the uterus, which was found just within the vulva.

"Spunges were introduced to keep it in its place: they however, gave her so much uneasiness that she could not wear them. Repose, blood-letting, and a mild regimen, caused both the engorgement and prolapsus to disappear, although the hysteralgia continued, being maintained by the nervous susceptibily of the patient, and by numerous irritating circumstances by which she was surrounded." p. 46.

Now, even in prolapsus originating from neglect of puer-

peral hygiene, when we have admitted, the weight of the uterus has contributed to its production, our opinion is that if care be not taken to remedy it, the displacement will continue, from the relaxed condition of the ligaments and vagina, notwithstanding the engorgement may have been resolved. When prolapsus occurs shortly after accouchment, the engorgement contributing to it is normal, and may be expected to disappear in a short time; but it is easy to conceive that the displacement may persist after the uterus is reduced to its healthy volume and gravity, if the ligaments do not regain sufficient strength to retain it in its situation. This is what, we apprehend, very often takes place in reality; prolapsus continues as a simple lesion of situation, unconnected with engorgement or any other pathological state of the organ.

And we are free to confess that our notions of treatment are so old fashioned, that we have strong faith in the pessary, an instrument, doubtless, which is liable to great abuses, but which, we know from experience, may be relied on for relieving or curing this troublesome infirmity, when properly and judiciously used. Much of the obloquy that the pessary has incurred, we are convinced, has arisen from the want of care to select proper cases. If, along with the prolapsus, there be engorgement, irritation or inflammation of the cervix uteri, it cannot fail to distress the patient and aggravate the existing morbid action. But if there be no morbid sensibility or tumefaction of the parts, the pessary will be easily tolerated, and is the only available means of effecting a cure. The alternative which has been proposed, rigid confinement to a recumbent position for a length of time, figures well enough on paper, but can scarcely be enforced in practice.

A full discussion of this subject, however, would be out of place here, as it has no other than an incidental connexion

with the object of Dr. Duparcque's work; we think the views he advances, exceptionable if sweepingly applied to all cases of prolapsus, will prove highly salutary if they deter practitioners from employing the pessary without the precaution to select cases proper for its use.

Our author, lastly, finds the *critical age* to be a source of uterine engorgements which, he thinks, are generally associated with the hemorrhages that are apt to occur at this time, and by the profuseness and frequent repetition of which the woman is placed in imminent danger. These hemorrhages, he allows, may take place, also, independent of any engorgement of the uterine tissues. It is, moreover, chiefly at this period, that various morbid tissues, scirrhous, cerebriform, melanic, &c., are developed in the uterus, whose subsequent alterations produce cancerous affections. According to Dr. D. all the structural lesions, which are manifested at this period, are not originated by the changes then experienced, but their seeds were sown long before, and are surrounded now by circumstances, favorable to their germination.

"In a very exact history taken from 40 women, between the ages of 40 and 50 years, who were affected with cancer of the uterus, only five were found in which the disease was of recent origin, or had resulted from the critical period; in 33 others, the catamenia had exhibited some irregularities since their last confinement, or after an abortion, or in consequence of one of whatever causes we have seen capable of exciting them in women, which the dysmenhorrhœa and the constant sterility, and other symptoms developed in the region of the pelvis, indicated some alteration in the uterus, which had immediately succeeded accouchment, abortion, or an accident; and finally, in the two cases which are quoted below, the affection appeared to have originated about the period of puberty." p. 48.

After the recital of the cases referred to, our author makes this declaration:

"It may therefore be established as a general position, that the critical age is dangerous only to those women who arrive

at this period with an alteration in the uterus already existing, and originating at a time more or less remotely anterior." p. 50.

We are not prepared to subscribe to the correctness of this view of the matter. That diseases, which had remained dormant for years, may receive an unfavorable impulse from the changes that take place at the *critical age*, and pursue their march with redoubled activity, we are not disposed to controvert; at the same time, we are every way persuaded that a majority of the diseases which harrass or destroy women, at this period, have their inception in the interruption or suspension of functions, to which the system had long been habituated. The morbid phenomena, as it appears to us, are referrible to want of coincidence between the exhalent and larger vessels, whereby the former cease to give passage to the menstrual blood, before the latter cease to obey the periodical affluxion; consequently congestion takes place, which continues to increase until an outlet is obtained by disruption or forced exhalation. Hence the hemorrhages, which succeed to the irregularities of menstruation that mark this period, and the hyperæmia which precedes them furnishes the nidus as well as material for disease. Be our reasoning valid or hypothetical, on a well established principle, the suspension or irregularity of an accustomed evacuation must prove detrimental to the uterus, and in this consists the dangers that environ it at the *critical age*. The congestions, which the uterus suffers at this period, may be relieved by the consequent discharge, or they may persist, and, receiving continual augmentation, perpetuate the hemorrhagies and lay the foundation for organic changes. This state, as well as the treatment appropriate to it, will hereafter receive illustration from the observations of our author.

Having enumerated the *causes* of uterine engorgements,

Dr. Duparcque next gives a general view of the formation, development and termination of the alterations of the uterus. Passing by hypertrophy and œdema as being sufficiently explicable, he remarks:

"The sanguine engorgements have their primitive seat in the capillary portion of the circulatory system peculiar to the uterus. The blood being attracted into this portion by the inflammatory erethism, soon accumulates there as in metritis: at other times it enters passively, being driven forward by a species of fluxionary movement, as in the engorgement by congestion. In these two cases, the blood may readily be carried to the exterior of the organ, by the mouths of the exhalents, and thus constitute hemorrhagic engorgements: it may also be urged into the cellular texture or the fibrous interstices of the uterine parenchyma, either by a kind of exhalation or after a rupture, either active or passive, of the vessels which naturally contain it. So long as the blood does not transcend the limits of the vascular system; so long as it may be driven there by the fluxionary movements, or attracted thither by the inflammatory irritation, the resulting engorgement is very susceptible of resolution. When the blood is thrown into the parenchyma, resolution is still possible, provided the original structure preserves its integrity, or can be restored to it. When the tissues are destroyed or profoundly altered as in inflammation with carnification in the highest degree of congestion, a reduction to the normal state is impossible." p. 55.

Here it will be perceived, a distinction is made between engorgement by congestion and engorgement from inflammation—a distinction which it is important to make, because they differ in nature, treatment and termination. It is not easy, it must be confessed, to draw the line of demarcation strongly between congestion and inflammation—in both there is preternatural accumulation of blood in the capillary vessels of the tissue affected; congestion necessarily precedes and accompanies, and frequently follows inflammation. The distinction attempted by our author, in the quotation just made, viz., that in inflammation the blood is attracted by the inflammatory erethism, while in congestion it enters passively, being

propelled by a fluxionary movement, is altogether a visionary one, and, as far as we know, unsustained by any species of evidence. And yet, this idea is frequently re-produced in his work, and is made the basis, harmlessly to be sure, of his therapeutic action. We may as well present it here distinctly, that his language may be understood, wherever this peculiar notion comes before the reader. Dr. D., then, supposes the existence of a fluxionary movement in the circulation; a sort of tide of the whole mass of the circulating fluids of the system, which is precipitated upon the uterus at certain periods,—at lunar intervals in healthy menstruation. The uterus has no agency in the production of this tide, by which it is to be fertilized or inundated, according as it may obey or transcend the law regulating its movements.

We do not believe that congestion, any more than inflammation, can take place in the uterus, unless produced by a modification of its vital properties: the afflux of fluids into its tissue is a vital phenomenon, and the determining cause of its congestion, therefore, is to be sought for in the condition of the organ itself. This condition, favorable to the occurrence of congestion, is not always the same, as we shall presently endeavor to shew.

After congestion and inflammatory engorgements, Dr. Duparcque notices the development and tendencies of scirrhous, cerebriform and melanic engorgements, which consist in the deposition of matters in the tissues of the uterus, altogether foreign to those tissues. According to him, the cellular is the elementary tissue or net-work, common to all organic alterations, as it constitutes the fundamental portion of all the healthy structures: in its meshes the molecules of these morbid masses are deposited, by an "abnormal vital elaboration:" or, as we, having no particular affection for sesquipedalics, would prefer phrasing it, by morbid secretory action.

"I take to myself the credit," says Dr. D., "of having been the first person who pointed out the immediate seat of scirrhous alterations. It was the subject of an inaugural dissertation, which I maintained in 1813. The opinion has since been generalized and promulgated by M. Cruvielheir, with that superior talent and knowledge which distinguish the works of that learned physician." p. 57.

Scirrhous degenerations begin to be developed in the cellular tissue, and whether encysted or infiltrated through its cells, they cause by compression the absorption of the other tissues of the organ in which they are situated.

"There is then a wasting," observes our author, "or to speak more correctly, an atrophy of the parenchyma proper to the organ. Indeed, if resolution of a schirrhous engorgement, of the breast, for instance, take place from any cause whatever, we find no traces of the mammary gland which was affected, it being reduced to its cellular or fibrous network. We therefore speak incorrectly when we say that these organic alterations consist in a degeneration of those tissues in which they are located—the tissue has not changed, it has disappeared; it is not transformed, its place is filled up by another." p. 63.

Scirrhous and other products of morbid secretory action may continue for a long time indolent, but at length the cellular membrane which supports them becomes inflamed, softened, and ulcerated, and then there is discharge of fragments of scirrhous and cerebriform matter, mixed with pus and blood. When this alteration, usually commencing in the centre of the mass, begins to take place, more or less severe pain is experienced and there is a rapid increase in the volume of the tumour.

Formerly scirrhus was ascribed to inflammation, of which, in glandular structures, it was believed to be one of the terminations. Dr. Duparcque observes, that it takes place in some instances without inflammation, and is developed spontaneously in the midst of healthy tissues, "in consequence of an abnormal vital orgasm or impulse, and without

the action of any of the causes calculated to produce inflammation." He allows, however, that, with few exceptions, scirrhus &c., of the uterus succeed to inflammatory or slightly ulcerous affections, which may be considered as their determinate, conditional cause. Scirrhous, cerebriform and melanic degenerations appear to be peculiar to more advanced age, as inflammations of a pseudo-membranous character are peculiar to infancy; they are most apt to be developed at the "critical age" in women, and after the 40th year in men.

Dr. Duparcque asks the following interesting practical question: "Are scirrhous and cerebriform alterations susceptible of resolution; can the matters of which they are constituted be absorbed?" He then recites two cases, which, he thinks, authorize an affirmative reply. In both there was scirrhous of the mammary gland; which became greatly reduced in volume and indolent, from having been the seat of lancinating pains, under the influence of rigid dietetic treatment, necessitated by other diseases. We may, with much more confidence, calculate on the resolution of congestive and inflammatory engorgements, though indurated even, as will be shewn when on the treatment of these affections.

Our author concludes the first part of his Treatise with some account of the modes of exploring the uterus, with a view to recognize its diseases. He bears the following emphatic testimony to their value:

"The importance of this physical examination, is not sufficiently appreciated by medical men, in order to recognize the causes of the various disturbances of the functions of the uterus and to establish the diagnosis of the numerous diseases to which it is exposed, and which, however different they may be in their nature, have so many phenomena in common, and so few that are peculiar to each, that doubts can be dissipated, and errors prevented, only by the touch.

"If we have attained some success in the treatment of the diseases of women, and especially those of the uterus, we must ascribe it in a great measure to the practice of touch-

ing. In informing ourselves of the existence, point of departure, and nature of these maladies, we have necessarily been made acquainted with the therapeutic indications, and practical experience has taught us the choice of means to fulfil them." p. 71.

The *vaginal touch*, made with the index finger aided by the medius if necessary, makes us acquainted with the state of the os tincæ particularly: whether it be indolent or sensitive, engorged or not, ulcerated or entire, &c. Through the cul-de-sac of the vagina, the body of the uterus may be brought under this mode of examinatian, and its volume, density, sensibility, &c. appreciated. The *hypogastric touch*, made with all the fingers or the whole hand, detects the condition of the fundus, and estimates the elevation of the organ. The examination by the rectum may take the place of the vaginal, when any thing forbids this, and through the parietes of the bowels the posterior surface of the uterus may be easily felt, and its condition learned. The *touch* will suffice, in aid of the symptoms, to make out the diagnosis of most uterine diseases; when obscurity remains, ocular inspection may throw additional light on the object of our researches. This may be immediate, when the organ or a tumour pendent from it is at the vulva; but if higher up, it can only be had *mediately*, through the speculum. Both as a means of diagnosis, and to facilitate the application of topical remedies in certain cases, the speculum will, doubtless, be found a valuable acquisition. But its employment is so abhorrent to the feelings of our countrywomen, that we doubt whether it will find much encouragement or become so general with us as in France, where things are conducted after a very different fashion. It will be a long time, we predict, and we hope the prediction will be verified, before our females will consent to be brought into an amphitheatre for accouchement, and reveal the mysteries of Lucina to the *gaze* of a crowd of students.

In accouchements, this indecent exposure is the more reprehensible, because it is wholly useless—the touch is the accoucheur's polar star; and it is, also, by it that he is to be chiefly guided, when entangled in the obscurities of female pathology. The speculum will be indispensable, if we wish to make local applications to the os uteri, particularly when cauterization is necessary.

In the second part of his work, our author describes the different kinds of engorgements to which the uterus is liable and discusses the treatment appropriate to each. Engorgements, according to him, may be the result of various alterations, viz.: 1st, Hypertrophy; 2d, Œdema; 3d, Sanguine Congestion; 4th, Inflammation, either acute or chronic, and induration; 5th, Scirrhus; 6th, Tubercles; 7th, Cerebriform alterations; 8th, Melanic alterations. The first of these, hypertrophy, he very properly remarks, does not constitute a pathological state, consisting merely in excessive development of the parenchyma of the uterus. It may, however, become a predisposition to other affections, or be mistaken for other organic alterations, and deserves for this reason some consideration. It is rare that the whole of the uterus is hypertrophied, the affection is mostly limited to the cervix or to one of the lips of the os tincæ: a condition which, Dr. Duparcque states, is often met with, and becomes an obstacle to the dilatation of the os uteri in parturition:—the neck, in these cases, becoming hard at the same time that the body of the uterus contracts and thus opposing difficulties to the passage of the child.

"In the cases where belladonna ointment has succeeded in removing this kind of obstacle, it has been *necessarily* owing to the causes I have intimated, the medicine acting only by paralizing the active contractility, because, when under its influence, the neck of the uterus ceases to become hard, and contract at the same time with the rest of the organ; it is evident that its thickening is not owing to any other circum-

stance than an abnormal development, without alteration of its tissue.

"If this engorgement was the result of a pathological state, an induration, for instance, as accoucheurs insinuate, the belladonna would be ineffectual, as no medicine could instantly change or destroy that state. Induration, does indeed very frequently exist; but in that case, the belladonna is entirely nugatory; and if the resistance be not overcome by expulsive effort and the laceration of the neck, the interposition of art is required to relieve it by scarifications or by numerous deep incisions." p. 81.

With the belladonna, but more frequently the stramonium, we have some experience in labor retarded by rigidity of the os uteri, and we have thought its efficacy incontestable in some instances; but are far from agreeing with Dr. Duparcque that in all such cases there is hypertrophy of the cervix. He has shewn very conclusively, it is true, that the obstacle, where the belladonna succeeds, does not consist in induration, but it does not follow, of course, that it consists in hypertrophy. Unquestionably, the obstacle referred to, in many instances, is purely dynamic and is nothing more than inordinate contractility of the fibres of the cervix, without hypertrophy or any other organic alteration. Hypertrophy is distinguished from other organic alterations by the part preserving its natural elasticity, except in the pregnant and parturient state, and by the absence of functional derangement, pain or any other symptoms of disease. With regard to œdematous engorgement, Dr. Duparcque observes, it often takes place in the cervix after lying-in, and seems to result from violence done this part during accouchement and disappears within six weeks. He thinks it must be exceedingly rare, under other circumstances, as he has met with only one case, among the many engorgements he has observed. But the next species of engorgement, which he designates the sanguine, is of very frequent occurrence, and is discussed at considerable length. This may be presented under three

different pathological forms: 1st, Engorgements by simple sanguine congestion; 2d, Engorgements by congestion with hemorrhage; 3d, Inflammatory engorgements. We shall present our author's views of each of these varieties in order; and first with reference to the simple congestive engorgement, it is to be observed that it does not always indicate a pathological state, inasmuch as it invariably precedes menstruation and follows parturition. This is not peculiar to the uterus: whenever any organ of the body is required to execute the function peculiar to it, it becomes the focus of sanguineous determination; this is true of the glandular, muscular, and nervous apparatus. A supply of blood, additional to what is requisite for nutrition, common to all the organs, is demanded as well to impart vigor as to furnish materials for the fluids that are to be secreted or exhaled. No arguments need be adduced to prove the existence of this normal uterine engorgement antecedent to menstruation and subsequent to parturition.

Dr. Duparcque offers the following analysis of uterine congestion:

"As in all active congestion, the engorgement of the uterus by congestion, is composed of two successive periods; first, that of the fluxionary movement, which directs and carries towards the uterus, the fluids, and particularly the blood, in much greater quantity than ordinarily. Secondly, that of the engorgement itself, which results from the presence and retention of the fluids in the parenchyma of that organ. The fluxionary movement determined by a particular concentration, or special direction of the vital power towards the congested organ, appears to be a phenomenon essentially nervous, or to be produced under the peculiar and direct influence of innervation. We have succeeded in promoting menstruation in girls, and in re-establishing it, when it has been suppressed, by means of galvanic or electrical currents, directed from the loins towards the pubis, and consequently from the origin of the nerves of the uterus, towards their termination in that organ." p. 89.

We do not suppose that congestion is divisible into the

elements, which the fanciful decomposition of our author discloses. It is, indeed, sufficiently probable that the stimulus, inviting an afflux of fluids to the uterus, makes its primary impression on the *nerves;* but it acts on the nerves of the uterus itself, and through them influences the capillary vessels. We reject, as altogether hypothetical, the idea of a fluxionary movement of the vital power pervading the whole nervous system, which takes a special direction towards the uterus, and flows to it like galvanic and electrical currents, conducting a tide of blood along with it in parallel channels. In the simple congestive engorgement, the blood which distends the uterine tissues does not pass the limits of the vascular system; whatever augmentation of volume the uterus may receive proceeds from vascular plethora—there is no extravasation of blood into the interstices of its tissues. It sometimes takes place slowly, as when it results from default of discharge, the menstrual movement still occurring. In this case it is increased periodically. After parturition it is produced more rapidly, the uterus speedily acquiring a volume equal that of the fourth or fifth month of pregnancy. To account for the enormous engorgements which are thus formed, we have to look beyond the nerves and bloodvessels of the uterus. The access and retention of blood in the tissue of the uterus are unquestionably favored by feebleness of muscular contraction, in consequence of which the over distended vessels fail to receive that support which a healthy tension of the muscular fibres would afford them. This dependence of the bloodvessels upon vigorous contraction of the muscular coat of the uterus is exemplified in the hemorrhages that take place during gestation, and more especially after parturition, the placenta being partially or wholly detached. Contraction of the bloodvessels themselves cannot be relied on for arresting such hemorrhages, and the excite-

ment of uterine contraction is the paramount indication, on which are founded our best and only certain remedial measures. By active uterine contraction, the tissue of the uterus is condensed and tightened, the calibre of the vessels is diminished, and they are braced against the distending force of the vis a tergo.

Besides the spontaneous development of engorgement at the menstrual period and after delivery, it is produced by many other causes, most of which, according to Dr. Duparcque, act primarily by exciting the fluxionary movement. And here he introduces what he considers an important remark:

"Whenever there exists in the economy, a natural or morbid tendency to a fluxionary movement towards an organ, it will be the elective or predisposing fluxionary movement, which will be excited by all the causes capable of developing in the general system, an increase of vital abnormal activity, indicated by the augmentation or excitation of innervation, and consecutive or concomitant exaggeration of the circulatory movements." p. 92.

We beg pardon for not at first recognizing an old acquaintance in this pompous presentation; but really his features are much disguised by the finery with which he is bedizened. In plain language the meaning is, that constitutional disturbance is apt to develop predispositions to disease that may happen to exist in any organ; and therefore derangement of the general system, from whatever cause produced, may eventuate in uterine engorgements, when predisposition to such an affection exists. Besides these general causes, there are others, which act locally on the uterus or organs in immediate proximity, such as the emenagogue medicines, coition, &c.

The symptoms of congestive engorgement of the uterus are thus detailed by our author:

"There are sensation of swelling, tension, and weight in

the pelvis; lumbar, sacral, and inguinal pains, attacks of pains more or less prolonged, and frequently repeated, during which the uterus seems to contract itself violently, as if to express the blood which has engorged it; peculiar pains, called colics or cramps of the uterus, a tenesmus or severe griping sensation in it. These pains are sometimes so extremely violent, that the patients are strongly bent forward during their continuance. In the mean time, pressure as well as the vaginal *touch*, prove the insensibility of the engorged parts, at least in the interval of these spasms or gripings." p. 93.

It may be observed moreover, that the constitutional derangement, if any attend, is rarely pyrexial, much more usually nervous, consisting in various hysterical affections. The intermittent character of the pain, and the absence of unusual sensibility or fever, distinguish simple engorgement of the uterus from metritis. Dr. Duparcque asserts that congestive engorgement readily passes into a state of chronic inflammation, and thence into the most profound organic transformations. It deserves to be remembered, also, that puerperal engorgement may easily run into acute inflammation; the intervals between the after-pains being gradually abridged, the uterus augmenting in volume and becoming sensitive to pressure, and febrile symptoms supervening. Congestive engorgement, by impeding the uterine functions, may become the cause of amenorrhœa, dysmenorrhœa, and sterility; and hence if pains be not taken to inquire into the condition of the uterus in such cases, the suspended or painful menstruation may be regarded as the essential disease, instead of the consequence merely of the engorgement.

With regard to the treatment of congestive engorgement of the uterus, the first and most essential indication, according to Dr. D., is "to arrest the fluxionary movement, either by removing the causes which have produced or maintained it, or by inviting it to other regions, determining it towards other parts by means of revulsive bleedings, by the lancet,

leeches or cups, and by irritants applied more or less remotely from the congested organ." Although the butt against which the remedies above mentioned are directed has no other than a fanciful existence, they are not the less valuable on that account, (for, correct practice may coexist with wrong theory,) and with a slight modification, the indication itself is real, and its fulfilment an object of primary importance. Though there be no fluxionary movement to prevent or arrest, such a one at least as our author describes, the uterus is undoubtedly the seat of excitement or irritation, and consequent sanguineous affluxion, which may be alleviated by the remedies indicated, on the familiar principle of revulsion or counter irritation. This principle is the basis of our daily therapeutical action in most of the diseases, which we are called to treat, and Dr. Duparcque has practised upon it, with great vigor and efficiency, in the management of uterine diseases. He abstracts blood generally and locally with great freedom, and under circumstances where others would hesitate or condemn it altogether. When he uses the lancet, however, as a revulsive, he does not detract blood largely, but aims to accomplish his object by repeated small bleedings, and from the employment of the remedy, he has certainly obtained most surprising results. That bloodletting should be classed among revulsive remedies, however, is by no means satisfactorily proved, and the idea is repudiated by many as altogether chimerical. The indication for revulsive bleedings and counter irritants, according to Dr. D., is appropriate:

"1st, in the case of accidental congestion, or one threatening to establish itself at other times than at the physiological periods: 2dly, at the same epochs when the fluxion and congestion assume a pathological character by their prolongation or violence: 3dly, before these epochs, when the uterus in consequence of any condition whatever of organization

that art cannot correct, is not inclined to relieve itself by a sanguine discharge of fluids which the menstrual movement carries thither, a kind of flux and an artificial supplementary fluxion is then substituted." p. 96.

Under all these circumstances the efficacy of bloodletting may be ascribed to its power of mitigating uterine irritation and allaying the general excitement, tending to augment the local determination of the fluids. If tranquillity of the circulation can be preserved, and the local determination averted, the uterine engorgement, prevented from increasing, will often be spontaneously dissipated. If it be not, we are to have recourse to more direct means of disgorgement, and as the menstrual discharge is the natural means, this should be promoted by appropriate treatment, relaxants, as the warm hip bath, where rigidity exists, and anodynes and anti-spasmodics, where there is neuralgic affection or uterine spasms. If the discharge is not brought on by these remedies, Dr. Duparcque applies leeches to the neck of the uterus, and has found them very efficient as well as prompt disgorgers.

When there is reason to believe that congestive engorgement is produced or kept up by atony of the uterus, as is more likely in puerperal cases, Dr. Duparcque recommends the secale cornutum, and extracts some confirmatory notices from the Annales Universales de Medicine de Milan, reported by Pagrani and Pignacca. These cases are related in too general and vague a manner, and apparently with too little care to ascertain the nature of the uterine affection, to authorize any satisfactory conclusion from them; we shall pass them by, therefore, and recur to this remedy when on hemorrhagic engorgements, in which its efficacy is less problematical.

Our author next treats of "congestive engorgement with hemorrhage," to which, he thinks, belong many cases of

metrorrhagia, menorrhagia, considered as morbid entities or primary diseases. This species of engorgement, which he denominates the soft in contradistinction to most others, of which hardness is a prominent character, is developed in the same manner as the preceding, is produced by the same causes, and consists in the same pathological lesion, and differs from it only in being accompanied by sanguineous discharge, which does not at all diminish the congestion.

"To judge of the frequency of the soft or hemorrhagic engorgements of the uterus by the great number of times which it has come under my observation, I should be astonished not to find it mentioned by authors, at least, in a special manner, and generally known to practitioners, if I did not know that they are generally attached only to the apparent phenomena, and that they do not give themselves the trouble to inquire into the state of the organs which furnish these phenomena, the essential or fundamental alterations, of which they are oftentimes only the effects or secondary symptoms." p. 101.

When consulted concerning sanguineous discharges from the uterus, practitioners are too generally content with superficial views of their pathology; some examination, indeed, is instituted into the condition of the general system, and this reflects valuable light on the general character of the hemorrhage. But whether the hemorrhage is the essential disease, or only symptomatic of another, more destructive because unsuspected, can be ascertained only by a careful exploration of the organ, which in these cases is seldom practised. Dr. Duparcque depicts very vividly the consequences which grow out of this neglect, and there is no reason to doubt the accuracy of the picture he has sketched, when the hemorrhage engrosses the whole attention of the physician, and he is only intent on its suppression. Should there be organic disease of the uterus, or only the soft engorgement, to a great degree, though the discharge may be promptly checked by the use of astringents, the real disease will not be cured,

nor its progress to fatal disorganization stayed. The mere anti-hemorrhagic treatment, indeed, may give increased velocity to the disease; the discharge being arrested, while the local determination and congestion continue, chronic phlegmasia supervenes, which completes more swiftly the work of destruction. Such, no doubt, has been the progress of many metrorrhagias, which might have been easily cured by more rational treatment.

"Like many others," says Dr. D., "I sacrificed to the common routine, but soon, desirous to enlighten myself upon the diseases of the uterus, I resolved not to give any advice, nor to undertake any treatment of the diseases peculiar to women, without my being at the outset assured of the state of that organ, and informed by a scrupulous examination, whether the morbid phenomena for which I was consulted, were essential, or symptomatic of some affection of the genital organs." p. 103.

To a rigid adherence to this determination, Dr. D. ascribes the knowledge he has acquired of numerous chronic diseases of the uterus, and the success he has obtained in their treatment. And he has satisfied himself that the greatest number of uterine discharges, usually considered as primary or essential, are merely symptomatic of a special engorgement either of the whole of the uterus or the neck alone. Now here an important question arises; what constitutes an essential hemorrhage? Is it required that there shall be an absolute exemption from all appearance of disease in the surface from which the blood is yielded? If so, we imagine that no hemorrhages will be found to be essential, except such as are produced by a section of bloodvessels with cutting instruments. Pathological hemorrhagy necessarily presupposes a vital modification,—an alteration in the circulation of the part affected. There is increased action of the capillary vessels, circulating a larger amount of blood than usual and with augmented force, or diminished resistance, permitting

them to become distended by the ordinary or an extraordinary vis a tergo. We cannot perceive how such a hemorrhage can take place without more or less congestion, and should, *a posteriori*, infer the existence of uterine engorgement in all cases of metrorrhagia, even if the observations of our author had not conclusively demonstrated it. We are not at all startled, therefore, at the announcement that in the "greatest number of uterine discharges" there is congestion; if he failed to detect it in *all*, it was only because in some it was too slight to be appreciable. As long as there is no extravasation of blood into the uterine tissue, no structural lesion, the prominent feature of such congestions is the hemorrhage; from this, when profuse, results much of the danger which attends such cases, and it is no serious misnomer to denominate them essential hemorrhages, in contradistinction to such as proceed from organic disease, ulceration, erosions, &c. where the discharge is properly symptomatic.

Dr. Duparcque is unquestionably right in condemning the treatment which has reference *merely* to the suppression of the discharge, as it recurs from time to time; to prevent or moderate the local determination, which perpetuates it, and furnishes its pabulum, is doubtless an important indication. The disclosures which have been made by the researches of Dr. D., relative to the state of the uterus, particularly its cervix and the danger of its ending in a species of cancerous degeneration, if not arrested, will, we think, exert a salutary influence on practice in hemorrhagic cases, by impressing more strongly on the minds of physicians the necessity of vigilance and of treatment to overcome this morbid state, as well as to staunch the bleeding when profuse. But we are not aware that our practice in these affections, prior to the discoveries of Dr. Duparcque, has been as grossly defective as he impliedly alleges; well instructed physicians, as far as

we know, have always had sufficient insight to suspect that hemorrhage would not take place without a *cause*, and they even found this to consist oftentimes in uterine or general vascular excitement. Accordingly, the treatment of metrorrhagia and other hemorrhages was nearly as well understood, and conducted on principles as rational before our author wrote. With uterine engorgement and all its threatenings before his view, he insists more strenuously on bleeding, and pushes the remedy farther than others; he bleeds, perhaps, when others might be deterred by the appearances of general anæmia and debility; but he attaches too little importance to astringents, and is over cautious in prescribing them.

But it is time to return to the current of our author's treatise, to trace along with him the progress of hemorrhagic engorgement of the uterus, when it pursues its course without interruption. He divides this into three different periods or degrees. In the first period, there is more or less considerable increase of volume of the whole uterus or its neck only, more or less deep red color, the consistence of the uterine tumor is rather softened, especially towards it centre, and the uterine orifice is enlarged in proportion to the engorgement. It is analagous to the hemorrhagic engorgement of the menstrual periods or that which succeeds to parturition: the hemorrhage occurs in paroxysms, excited by whatever has a tendency to accelerate the circulation or determine to the uterus—as the erect position prolonged, inordinate exercise, straining at defecation, coition, the *touch*, &c. In the second period, the engorgement has increased but the uterus never acquires the volume it does in congestion without hemorrhage; the ramollissement has advanced, the neck of the uterus is of a deep red color, appearing as if the blood had been strained through the surface of the organ by compression. The general symptoms thus far are such as evince only

loss of blood; discoloration of the tissues, debility, dragging in the gastric region, loss of appetite, or insatiable hunger, "as if, says Dr. D., nature were striving by an abundant alimentation to make reparation of the vivifying fluid, incessantly lost." After several years and sometimes after a very short interval, the third period arrives, when the engorged neck of the uterus is found advancing into the vagina, making a tumor of a brown red color, its surface covered with layers of coagulated blood, giving it unevenness to the touch; pressure detects crepitation and expresses dark blood as from a sponge. The blood has infiltrated the diseased structure, disorganization has taken place, reducing the uterine parenchyma into a mass of fibro-cellular and vascular filaments, mixed with dark coagula of blood. In different parts of this altered mass are found small cavities filled with pus mixed with black blood—evidences of inflammation superadded to the engorgement. Dr. Duparcque describes another termination of the engorgement under consideration:

"The centre of alteration, represented by the orifice and internal surface of the uterus, soft, macerated and destroyed, is transformed into an ulcer presenting a stratum, more or less thick, soft and putrilaginous; the limits of which, marked by chronic inflammation, form an almost scirrhous base. The general symptoms also disclose by their intensity, or their special character, the existence of hemorrhagic engorgement, arrived at the last degree." p. 108.

The general symptoms, or effects of the local malady on the constitution are such as evince extreme anæmia—the cutaneous and mucous tissues are completely bleached, and to this is joined the straw-like yellow tint, observed in ordinary cancerous affections; the eyes are dull, debility extreme, and general bloatedness conceals the marasmus of the muscles, which are soft and flabby.

When hemorrhagic engorgement has attained the third

degree, we are compelled to relinquish all hope of a restoration of tissues, so completely disorganized. Unless the patient is cut off by the profuseness of the hemorrhage, we may hope for a certain and safe recovery, as Dr. D. assures us, in the first two periods, if a rational method of treatment is pursued, which he next proceeds to point out.

The treatment of uterine engorgement with hemorrhage is, in many respects, the same as that of simple congestion. One very essential indication is the same, viz., to moderate the force of the circulation when excessive and determine from the uterine organs. This is to be accomplished by the avoidance of the causes, calculated to excite and favor a fluxion towards them, and by bloodletting, purging, diet, and repose, whenever the vascular action is inordinate. Bloodletting, being a potent agent for good or evil, is not to be indiscriminately resorted to. In these cases, the hemorrhage itself is draining and exhausting the system, and the constitutional symptoms are such as proceed from loss of blood. What is the object, then, in detracting blood by the lancet? Dr. Duparcque would answer, to arrest or divert the fluxionary movement; but the only justification known to us is that by its timely use we may hope to prevent or moderate the uterine hemorrhage, and thus *economise* the patient's blood. When, from the long continuance or extent of the hemorrhage, the symptoms, indicative of excessive loss of blood, begin to be manifested, all farther loss is to be deprecated as an evil, and it is only as a *less* evil that the lancet is to be tolerated. In the commencement of these attacks, before the strength has been undermined, and while there is an active state of the circulation, it is not generally difficult to decide on the propriety of bloodletting. But when the complexion is bleached, the strength seriously impaired, and the cellular tissue begins to be infiltrated with serum, we

ought not to bleed unless we are satisfied the hemorrhage is sustained by exalted arterial action. We are persuaded that much judgment and experience are required to enable one to bleed again and again, in chronic metrorrhagias; and we deem it a duty to express this conviction, to guard our junior brethren against the temptation which is offered by the successes of our author. Even in doubtful cases it is better to decline bleeding, and trust, for the fulfilment of the first indication, to revulsives and perfect repose in a recumbent position. Sinapisms may be applied to the extremities, and successively over every part of the surface, particularly along the spine; dry cups; scarified cups over the sacrum; purging, which Dr. D., with the most of his countrymen, neglects or feebly practises, may be very advantageously resorted to with the same view. The next indication is to put a stop to the flow of blood from the uterine vessels by the use of astringents. The best remedy of this class is the Acetis Plumbi in combination with opium, or where this is objectionable, the vegetable astringents, particularly Rhatany, in tincture or extract made into pills.

Speaking of astringents, Dr. Duparcque says:

"Most of these medicines seem to limit their constrictive action to the inhalent orifices and scarcely reach even the capillary vessels. They may prevent extravasation of blood and suppress the hemorrhage, but are not always effectual in arresting the fluxionary movement. Congestion therefore increases or continues notwithstanding their use; the engorgements either remain stationary or increase, or if the blood which constitutes it finds in the provoked resistance of certain parts of uterine tissue an obstacle to its accumulation or discharge, reactions occur, from whence arises an inflammatory state often more dreadful in its consequences than the primitive malady." p. 111.

That such evil consequences might result from the purely astringent practice, we are not prepared to deny; in theory as well as on Dr. Duparcque's word, we are disposed to

believe it. We, therefore, concur with him in the necessity of observing the first rule which he lays down to govern the use of astringents, viz., the preparatory use of depletory or revulsive remedies. But we are not so sure that his second rule is entitled to our unqualified reception; it runs thus:

> Astringents may be employed "when the congestive engorgement and consecutive uterine discharges shall appear to be maintained rather by a state of atony or relaxation of the diseased tissue than by an active capillary circulation, a state which is presumable when the disorder continues during a certain time, and when the abundance or the continuance of the sanguine losses has occasioned a general feebleness." p. 112.

The flow itself is calculated to keep up and augment a determination of blood to replenish the exhausted uterine vessels, and the tendency of hemorrhage is, therefore, to perpetuate itself. After the reduction of the force of the circulation, by bleeding and other antiphlogistic means, we are in the habit of restraining the hemorrhage with as much expedition as possible, by the sugar of lead and opium, nor are we conscious of having done harm by the practice. It has already been remarked that sometimes simple uterine congestion appears to be owing to atony of the muscular fibres; this is still more apparent in congestions with hemorrhage, particularly shortly after parturition. In such cases, uterine contraction is but feebly exerted after the expulsion of the child; the organ remains congested and may be felt above the pubes; the lochial discharge continues, or if it had ceased is soon replaced by a sanguineous draining. Ergot is the proper remedy in these cases. Dr. Duparcque speaks very highly of it, and supposes it acts as an astringent on the bleeding vessels, besides exciting muscular contraction. We extract a few cases illustrative of our author's practice, which may be perused with profit. The following is a case

of ordinary occurrence, and the treatment was as simple as it was effectual.

"Mad. J., aged 32, of a sanguine temperament, perceived an unusual prolongation of her menses, in November, 1827. In January, 1828, there was an abundant discharge; since that time more or less serous blood, has constantly been discharged, though in small quantity. Moral emotions, fatigue, and especially conjugal approaches excited hemorrhages, pains in the loins, and a sense of constriction and weight in the pelvis. This sickly state was at first neglected, but was afterwards declared to be the prelude to cancer of the uterus, and that there was little hope of cure. I saw the patient in the meantime, nine months after the beginning of the derangement of the catamenia, and obtained with difficulty, permission to explore the affected organ, because my predecessor, they told me, had not thought it necessary to touch in order to recognize the malady and indicate the treatment. I found the neck of the uterus enlarged, though slightly projecting into the vagina. The finger, in passing over the circumference of this canal, felt the body of the organ swelled as at the third month of pregnancy. Applying at the same time the left hand upon the hypogastric region, to seize the uterus between it and the exploring finger, I assured myself that this organ was more than double its volume in height. This exploration was painful and caused a discharge of pure blood from the orifice, which was enlarged without being open.

"Notwithstanding these continual and repeated floodings, Mad. J. of a naturally highly colored complexion, had preserved these colors upon her cheeks, but the lips and nose were of a pale yellow: pulse frequent and strong. (Bleed sixteen oz., observe absolute rest and diet, drink lemonade.)

"I was about to visit this lady on the ninth day, when she came to me, pale, faint, and fatigued; but informing me that the discharges were arrested, that she suffered no more, and that she hoped she should, by using discretion be able to pass from under my care.

"I found the neck of the uterus more prominent, less thick and painful, but the organ was not entirely reduced to its ordinary volume: the *touch* even caused a slight flow of blood.

"Notwithstanding my entreaty, I could not induce the patient, to submit to repose at least; but afterwards the return of the affection, obliged her to resume her bed, where I was able to keep her for about six weeks. Three bleedings

were practised in this time; since then, her menses have been regular in frequency, and moderate in quantity." p. 117.

Here is a case of hemorrhagic uterine engorgement subsequent to parturition, and the ergot displays its powers very triumphantly.

"The subject of this case, was a fruiterer of 29 years old. Eight months had elapsed since she was confined with her second child; since which there had been a constant discharge of a small quantity of clear blood. She was tormented by dull pains in the sacral region, sense of dragging in the stomach, fastidiousness of appetite, and laborious digestion. Every ten or twelve days, the blood flowed in very great abundance. This woman, in spite of a progressive feebleness which this continued discharge produced, was almost always engaged in her little trade: a more abundant and protracted hemorrhage took place, and obliged her to lay in bed: four days after which, I was requested to visit her: the discharges had begun to moderate; there was discoloration and general emaciation, the pulse was frequent, moderately hard and undulating, urinary and alvine excretions in their natural state. I proceeded to examine the uterus—its neck which was tumefied, occupied to a great extent, the bottom of the vagina, was soft like sponge—and the contact of the finger excited a great discharge of blood; the examination was very painful. The thinness and relaxation of the abdominal parietes, allowed me to feel the body of the uterus, just in advance of the sacro-lumbar angle; it was of the size of a goose egg, and appeared but slightly painful.—(Repose—light broths—rice water.)

"The hemorrhage abated, though the discharge of clear blood continued: the eighth day after, there was little change in the state of the uterus.

"I suspended one drachm of ergot, finely powdered in four ounces of water, of which she took one tablespoonful every two hours. Next day, all discharge had ceased. I did not repeat the examination per vaginam, till three days after, from a fear of renewing the hemorrhage: the neck of the uterus was firmer, and reduced more than one-half. Two drachms of the ergot had been used—a third was administered by a spoonful every three hours, with an allowance of light soups. The neck of the uterus became longer and thinner; the fundus of the organ could not be felt above the hypogastrium. As the febrile movement continued under the intermittent form, and as the stomach refused food, I gave her

instead of the ergot, ten grains of the sulphate of quinine, in the potion, during the next eight days—allowing her also, rice ptisan, to be colored with a little wine.

"The fever was arrested; she regained her strength, and her menses re-appeared in only two months afterwards, in ordinary proportion." p. 118.

The next and last case we shall cite exhibits in strong relief the benefits of astringents; the sulphate of iron, a very good one, being employed. It was a case of uterine hemorrhage at the critical period, maintained by a congestive engorgement of the uterus.

"Madame ———, aged forty-two, of a strong constitution and full habit, had never suffered from deranged menstruation since her last infant, which was born at the age of thirty-six.

"For the first time her menstrual period came on early in September, 1823; the flow was moderate but prolonged, even to the next period. Debility obliged the patient to keep her bed for eight days, during which she took rice-water. The hemorrhage having ceased, she returned to fatiguing labors. At very frequent periods the hemorrhage was renewed, though less violently, there was a discharge of serous blood in the intervals, as well as pains in the pelvic region. She was bled twice in the course of a year, and took astringent drinks and occasionally allowed herself a few days of repose. The symptoms then abated, sometimes even disappeared, but quickly to return. This treatment was advised with the avowed intention of warding off the pains until nature should put an end to the phenomena judged to be common to the age of the patient. Three physicians whom she had successively consulted, had not thought it proper to *touch* her.

"I saw this lady in March, 1824, a year after the derangement of the menses had begun. She was completely discolored, with a tinge of pale yellow, though her flesh was soft, she still preserved the appearance of embonpoint, the cellular tissue seeming rather œdematous than charged with fat; the eye-brows and lower extremities were greatly infiltrated; there was want of appetite and sleep. She felt an uncomfortable heat above the pelvis, sense of weight about the anus, with sacro lumbar pains, mostly dull, but occasionally severely lancinating.

"The uterus was prolapsed, its neck rested upon the fourchette and could be perceived in separating the labia externa; it was very much swelled, reddish brown, hard at its circumference, but softer towards the orifice, which was

dilatable to the extent of admitting the point of the finger, though it was not gaping open; the anterior lip was larger than the posterior; a red fluid was discharged from the os tincæ. The examination was followed by a discharge of a large quantity of dark blood.

"The enlargement of the abdomen would not allow me to examine the uterus through the hypogastrium, but with the finger per anum could feel the whole extent of the engorgement, which appeared to be about two inches in height, and to lose itself in the body of the uterus, the posterior form and limits of which I could trace.

"I prescribed horizontal posture, with the hips elevated, a bleeding of twelve ounces, rough frictions upon the whole skin, acidulated drinks, light soups. After the fourth day, the uterus returned to its proper position, solely in consequence of the horizontal posture of the patient. There was also less discharge. Three small bleedings were performed at intervals of six or eight days, dry cups and sinapisms were freely applied to the skin.

"The engorgement was reduced more than one half in six weeks; the neck was pliable and soft, but bled very freely upon being touched: pain and all sense of inconvenience had disappeared. Two more small bleedings were practised, but without great diminution in the engorgement of the neck, in its softness or liability to bleed. In June, her digestion became difficult, her strength recruited but little, and there occurred general and even local atony. I thought it proper to direct her to use tonics and astringents, rice-water with wine, pills of sulphate of iron, and extract of gentian.

"In July, all the discharge had ceased, the neck of the uterus was the size of a thumb, pliable, soft, and elastic, the appetite returned, and the patient began to leave her bed. I advised her to go into the country. It was not more than two years before she regained her strength and color; since that time her health is perhaps more robust than previously." p. 127.

From congestive, our author passes to inflammatory engorgement or inflammation of the uterus. His remarks are restricted as exclusively as possible to metritis, or inflammation of the uterine parenchyma; though we think it will be found a very difficult, if not impracticable undertaking to distinguish with absolute precision between metritis and metro-peritonitis—for, in puerperal cases at least, inflamma-

tion is seldom limited to the proper tissue of the uterus, but extends to the bloodvessels and lymphatics, and involves, more or less deeply, the peritoneal covering of the organ. The special object of our author is to treat of the chronic engorgements of the uterus; but as these often succeed to the acute, he presents us with a sketch of the acute stage of metritis.

Engorgement by inflammation, according to Dr. Duparcque's observation, may be confined to a very small portion of the uterus—to its anterior or posterior face, to a single lip of the os uteri; and the volume of the organ is not greatly augmented by it. The congestive engorgement, on the contrary, is apt to affect the whole or a complete section of the organ, and the increase of its development, moreover, is much more remarkable.

"I am persuaded" says he, "that a great many of the large engorgements reported as puerperal metritis, depend almost exclusively on a simple state of congestion: the local and general symptoms of even moderately acute metritis, are commonly very strongly pronounced; should we not therefore perceive a greater degree of violence in the general and local symptoms attending those sometimes enormous engorgements occasionally occurring at the termination of parturition, if they depended upon inflammation." p. 146.

Such mistakes, we doubt not, are committed daily. Called to a puerperal woman shortly after confinement, and finding the uterus greatly swelled, sore to the touch, severe spasmodic pains, and some febrile movement, excited by the mammary and uterine engorgement, the physician may conclude that he has to do with a case of puerperal fever, for which he is or should be on the look out. But this mistake is a very harmless one, if it do not lead him to undervalue the danger of real inflammation, or to disparage his brethren for their unsuccessful combats oftentimes with the giant, because he has uniformly conquered the dwarf. It

is better, indeed, to err on the side of safety, by considering and treating a painful congestion as an inflammatory affection, than by supineness to permit its conversion into this destructive malady: for, it is well known, that after-pains may terminate in inflammation of the uterus.

We find nothing particularly worthy of comment in our author's enumeration of the causes and symptoms of acute metritis; they are too familiar to arrest our attention. It may terminate in suppuration, gangrene or resolution; if any thing occurs to hinder this latter mode of termination, chronic metritis will result. On this subject our author makes a highly valuable observation, which should never be lost sight of in practice.

"The great tendency which inflammation has to pass into and maintain itself in the chronic state, is favored by too precipitately abandoning therapeutic means, and the precocious neglect of hygienic precautions. Women relieved of their sufferings easily believe themselves out of all danger, and unhappily, many practitioners participate in this fallacious security. In their satisfaction of having been able to ward off an imminent danger, they do not sufficiently consider those which lurk, to burst forth not less terribly at some future period. Women pass from a few days of comfort, which hope had exaggerated to them, to a state of habitual uneasiness, the functions of the uterus not becoming established. We are still fortunate, if after a longer or shorter time, we should recognize the disease, and know how to apply the means, which, rationally and properly employed, restore the organ to its normal state, and re-establish its functions." p. 152.

The treatment recommended in acute metritis is good as far as it goes; bloodletting, general and local, proportioned to the intensity of the symptoms, emollient cataplasms over the hypogastrium, &c. are remedies of primary importance. But we do not think that purgatives should be replaced by lavements: yet they are not mentioned by our author. According to our observrtion, cathartics are productive of the most salutary effects, when such are selected as act extensively

on the secernent system, without endangering intestinal irritation or hypercatharsis. With such a view, calomel is undoubtedly the best cathartic, following it with oil or calcined magnesia combined with small portions of Epsom salts. To alleviate pain, opium may be advantageously combined with the calomel; 1 to 2 grs. opium, or 8 to 10 grs. Dover's powder along with each dose. But we refrain from farther remark on the treatment of acute inflammation of the uterus, as it is only cursorily and collaterally noticed in the work before us.

"It frequently happens," as our author truly observes, "that, notwithstanding the well meant active employment of all this train of rational means, the uterus remains swelled, and engorged as though the local disease had become stationary. The general sympathetic phenomena, and the acute local symptoms, have in part yielded; we have to resume again, or to persist in the employment of the same means which have arrested the inflammation in its progressive march. Nothing more can be done to make it retrograde, and bring about resolution. It is evident that in this case, the parenchyma of the uterus, greatly distended by the engorgement, has lost the tenacity sufficient, in returning upon itself, to force out the fluids which engorged it." p. 156.

This state, as our author judges, is similar to the hepatization of the lungs after pulmonary inflammation, and still more strikingly so to that which the tongue presents in certain states of glossitis. In this condition, the blood which engorges the diseased tissues is out of the course of the general circulation, and were the last drop drained from the bloodvessels, the engorgement would not the less persist. This incomplete resolution furnishes the elements of alterations, which soon or late assume a grave character. Dr. Duparcque inquires, what are the best means of attaining a resolution of uterine engorgement under such circumstances? From analogy we should be induced to have recourse to the means which appear to act most beneficially in hepatization

of the lungs and chronic glossitis—emetics as counter-stimulants in the former, and bleeding from the tongue by leeches or scarifications; and Dr. Duparcque states that he has been much gratified with the use of these means in this state of the uterine engorgement. He has not made trial of tartarized antimony as an emetic, or administered it by the stomach; it is by the endermic use of it that he prefers introducing it into the system, with a view to its resolvent operation.

"This medicine appears to me, to produce incontestable results, by exciting in a remarkable manner, the resolution of metritis, when after having employed the ordinary treatment, this disease is disposed to become stationary." p. 158.

His object being to procure its absorption through the skin, precautions are taken to avoid producing pustulation. As we think the remedy deserving of trial in the cases mentioned, although we have no experience of it, we subjoin his directions and shall presently quote a case, illustrative of its prompt efficacy.

"I incorporate one part of the tartar emetic with eight of common lard, (1 dr. to 1 oz.;) for each friction I take about half a drachm of this ointment. The first friction is made on the inner side of a leg in the evening, a second friction is made on the inner side of the other leg the next day; frictions are made on the thighs, one in the morning and the other in the evening; on the third day they are made alternately on each arm; and on the sides of the thorax the fourth day. We then re-commence and go over the same ground. We should rub extensively, lightly, and for a long time with the palm of the hand. If pustules appear on any part, we must cease to repeat the frictions upon it. If after having emyloyed in this manner about 3 ounces of the tartar emetic, we do not perceive any results, we should cease." p. 267.

The other means of relief, suggested by the analogy of glossitis, local bleeding from the affected part, has been practised by Dr. Duparcque with the most signal advantage.

Although incisions into the os uteri, radiating from its circumference to the orifice, might perhaps be practised

without inconvenience, for abstracting blood directly from it; as the cicatrices resulting from them might interfere with the dilatation of the orifice in subsequent parturitions, Dr. D. did not think proper to adventure them, but had recourse to the direct application of leeches.

"The disgorgement and the melting down as it were, which results from their free suction, are effected with a truly astonishing rapidity, not only when the neck alone is diseased, but even when the metritis is general.

"A small number of leeches applied upon the neck, suffices to produce an abundant discharge of blood. It might be dangerous to apply in cases of metritis more than eight or ten at a time: otherwise, we would have a dreadful hemorrhage, which might however be easily arrested by the tampon." p. 165.

Acute metritis after parturition—antiphlogistic treatment—prompt resolution under the influence of tartrate of antimony in friction.

"Mad'lle ———, aged 26 years—of strong constitution, was delivered February 15th, 1828; on the 20th, after a deep emotion, she had a chill, and sudden flattening of the breasts. Lochia continued.

"21st.—Abdomen tender, hard and painful; violent and frequent sharp cutting pains in the uterus; fever; urine scanty; the discharge of it painful; constipation.

"Directed fifty leeches—with cataplasms—on the abdomen.

"22d.—Abdomen pliant; permitting us to feel the body of the uterus, which rose several inches above the pubis, was largely engorged, hard and painful to pressure—the cutting pains continued.—(25 leeches to the abdomen, occasioned copious bleeding.)

"23d.—Same state of the uterus; general discoloration; sinking; pulse small, soft, and 120 strokes to the minute.

"Directed frictions of tartar emetic ointment on the inner sides of the limbs, and on the sides of the trunk.

"24th.—Uterus less voluminous.

"25th and 26th.—Resolution continues; and on the 27th, the organ could scarcely be felt in the hypogastric region.

"Five drachms of the tartar emetic were employed."—p. 159.

Acute metritis, when neglected or but partially subdued, terminates in chronic phlegmasia, which is more or less

quickly transformed into induration, and this again differs but little from scirrhus. Between these three states, chronic metritis, induration and scirrhus, the resemblance is so close that they are considered by most writers as different states or degrees of the same disease, and Dr. D. observes that they cannot really be distinguished from each other, in a great many cases. He unites them, therefore, and describes them under the common denomination of *hard engorgements of the uterus.* The whole of the organ may be the seat of this engorgement, but more frequently it is confined to the neck or even to one of the lips of the os uteri, in which case the *posterior* is oftener affected than the *anterior.* It is worthy of remark that in *girls* the hard engorgements most commonly affect the *whole* of the uterus, while in women who have borne children, the *neck* alone is implicated, and they may preserve their character of simple induration for many years, *but at the critical age, they have a tendency to pass through the scirrhous state to confirmed cancer.*

These engorgements give rise to various symptoms and accidents, which may absorb the attention of the practitioner, to the neglect of the radical disease, which is allowed to progress, or is even aggravated by the symptomatic treatment pursued. The most frequent of these local accidents, as Dr. D. assures us, is the prolapsus of the uterus, brought on by the increased weight of the organ and the yielding of its ligaments. If the prolapsion alone is regarded, and a pessary applied, the distress and pains, attributed to the displacement, are exasperated, and the instrument has to be withdrawn, or the irritation caused by its presence hastens the march of the disease to destructive ulceration. A knowledge of this fact should make us careful in the use of the pessary, but must not determine us to reject it altogether, as some have precipitately done. We have here the strongest

sanction for a rule which ought never to be violated: viz. the pessary must not be advised until a careful examination per vaginam has been made and the condition of the uterus ascertained. If there is no engorgement or sensibility,—no lesion but the simple displacement, the pessary may be safely applied, and forebodings of danger from it are puerile in the extreme. Besides the incoveniences ordinarily accompanying prolapsus, such as sense of dragging, from the groins and loins, pressure upon the rectum, the sensation of a body about to escape from the vulva, &c. hard engorgement of the uterus is attended with pains of a much more distressing kind. These consist in a sensation of heat and burning, in sharp, piercing, pungent, lancinating pains, passing like electric flashes through the sacro-lumbar and coccygeal regions. These pains are augmented by much walking, standing or sitting, and are not entirely calmed by a horizontal position—the heat and burning becoming almost insupportable from the warmth of the bed. They are more acute at the menstrual periods.

"In general, no relation exists between the degree of development, the early or advanced state of the engorgement, and the intensity of the pain. A voluminous engorgement, arrived at the scirrhous state, frequently occasions little or even no pain, whilst at other times, very acute and severe pains accompany a very moderate engorgement; it even happens in certain cases, that the pains are, by their predominancy, so little in relation with the engorgement, that the latter seems only to be the result of the pains in consequence of the afflux of humours which they occasion."—p. 188.

Hysteralgia or a painful affection of the uterine nerves, alluded to by Dr. D., in the conclusion of the paragraph quoted, has now been so frequently observed that it is almost as familiar as a kindred affection, tic douloureux. It is, by far, the most excruciating, tormenting and intolerable malady, to which the female genital organs are liable. The pain

recurs in paroxysms and is not confined to any one of the organs, and may be propagated to the rectum and bladder, simulating calculus, &c. Though the pain may be described by the patient to be both gnawing and burning, neither redness, tumefaction nor sensibility may be discovered in the vulva, vagina or uterus. In its treatment, antiphlogistics are of no avail, and the sulphate quinine, in large doses, is the most certain reliance. As it is important to recognize this neuralgic affection in practice, we ask the reader's attentive perusal of the following case from our author.

"Madame R. C———, aged 28 years, of a tall stature, robust constitution, was happily confined about the first of October, 1827. She did not nurse, and the menses became established after six weeks, and reappeared regularly as before, till February following; they did not then recur at the ordinary period, without any appreciable cause to explain the suspension; but eight days after, the discharge reappeared, accompanied by severe pains, which particularly affected the right iliac region, whence they were extended into the pelvis and even to the opposite iliac region. The patient said the pains extended to the fundament, as in labor; they were quick, lancinating, tearing, and continuing several minutes, leaving between them only short intervals, and their violence was such that they excited the cries of the patient, throwing her into a state of most inexpressible anxiety, causing delirium and convulsive motions. These phenomena which had appeared in the morning, passed off by the middle of the night, leaving her extremely fatigued, but at noon next day there was a recurrence of the affection; after this period, the attack returned every day at the same hour; the pains at first slight, gradually increased in force and frequency; in the intervals the blood continued to flow in small quantity; it appeared to have been much more abundant during the attack. The accoucheur, called about the eighth day after the invasion of this accident, attributed them to a probable abortion, but their prolongation beyond the accustomed term, made him think there was perhaps inflammation of the uterus; and from this idea, sanguine emissions, repose, fomentations and emmollient cataplasms, sweetened drinks, enamata, demi-baths, &c. were brought into use, but far from diminishing, the attacks were sometimes more violent. I saw this patient at ten o'clock, P. M., 14th March, about the 25th day of her

disease. She had fallen into a state of extreme emaciation; the appetite was unimpaired, the tongue was soft, the color natural, the temperature of the skin was then more elevated, the pulse frequent and irregular, and in the middle even of the attack, the abdomen was soft, flat, by no means sensible to the touch; pressure excited it is true a little pain in the iliac and hypogastric regions, but it bore no relation to the violence of those which took place spontaneously in those parts. I felt nothing in these regions, the parietes of which were easily compressible, that could lead to the suspicion of any organic lesion whatever, in the ovaries or the body of the uterus. I found the neck a little swelled and partially opened, but not more so than it commonly is during menstruation. In seizing the uterus between the two exploring fingers, in order to *touch* it, whilst the other hand was planted above the pubes, I assured myself that this organ was in its natural state, as to its volume and consistence. Can there not be a uterine neuralgia, a regular periodical hysteralgia? I thought I could assure Madame C., who believed her condition desperate, that probably this attack which had not yet terminated, would be the last.

"I prescribed 8 grains of sulph. quinine, in four pills, to be taken next morning.

"15th. This medicine produced those happy effects upon which I had counted. The pains did not return at the accustomed hour; some appeared in the evening, but they were infrequent, slight and dull; the sanguine discharge became more abundant, and was the only phenomenon of the attack which exhibited itself.

"16th. The same prescription. Not only did the patient experience the most perfect calm, but the sanguine discharge had sensibly diminished; it was completely arrested on the 17th. I prescribed again by way of precaution, six grains of sulphate of quinine; the disease definitively disappeared."—p. 189.

But we return with our author to pursue the inquiry into the consequences of hard engorgement of the uterus:

"Every hard engorgement, without ulceration, ought also to suspend or diminish, in a word render the menstrual secretion more difficult: and in fact, dysmenorrhœa is the most common sign of these affections. When the engorgement is limited, it may by the dragging and the irritation which its presence occasions upon the parts which remain sound, readily determine sanguine congestions, and more or less abundant hemorrhagic discharges, but these cases are ex-

tremely rare. It is after attentive examination, and upon a comparison of facts which we have had occasion to observe, that we believe ourselves able to establish as a general proposition, with few exceptions—

"1st, That dysmenorrhœa is a character distinctive of hard engorgements; as habitual discharges are the ordinary result of sanguine or congestive engorgements:

"2d, That the *touch* which in the last constantly excite a flow of blood, scarcely ever produces a similar effect in the hard engorgements." p. 199.

Besides suspending or impairing the exhalent function of the uterus, the hard engorgement may affect menstruation in a different manner. The tumefaction of the os tincæ must contract its cavity, and if the lips of the orifice are considerably affected, this may be rendered nearly impervious, and thus a mechanical impediment will be offered to the escape of the menstrual blood, which coagulates and is afterwards expelled by uterine contractions. Although we do not doubt that chronic metritis may lie at the bottom of dysmenorrhœa, we do not believe that this form of menstrual derangement is invariably connected with, and indicative of such a pathological lesion; it may proceed from muscular or neuralgic affection and from simple congestion. And on the other hand, amenorrhœa or arrest of the menstrual function, instead of dysmenorrhœa, may result from chronic metritis.

Various general or sympathetic symptoms may be produced by hard engorgement of the uterus; among these the most constant is vomiting. "*Vomiting, when it exists at the same time with dysmenorrhœa, our author states, becomes an almost certain diagnostic sign of hard engorgement of the uterus.*" Fever rarely attends, but hysterical symptoms are often met with.

Hard engorgements have very generally terminated unfavorably, which, our author thinks, is ascribable to their not being discovered and properly treated; for, he has experienced that they are susceptible of cure, in a large number

of cases. His prognosis is cheering, and, if generrally realized, will animate hope and excite to vigorous action, in behalf of a class of patients hitherto surrendered to their fate.

"Every general or partial engorgement, which occurs in girls, and succeeds to causes which disturb menstruation, those which are developed more or less immediately after delivery, either premature or at full term, are almost without an exception, susceptible of resolution, since they are simply owing to a chronic metritis, to a state of induration, or offer signs which lead to the presumption of their scirrhous nature. The prognosis is more unfavorable in the engorgements which are developed or augmented in women upon the "turn of life." Nevertheless, it is not impossible to cure them, or at least to render them stationary.

"The engorgements which occur after the critical period, are in general incurable; but by the slowness of their progress and development, they do not cause immediate danger to the patients.

"The engorgements which, in being developed, remain hard, without inequalities which do not occasion insupportable pain, nor remarkable derangement of the functions, either general, or of the adjacent organs, should occasion less fear of their fatal termination than those which are covered with soft wrinkles, and which occasion quick and deep lancinating pains; for of these, the approaching transformation into ulcerated cancer is beyond doubt.

"The prognosis is less grave in engorgements limited to the neck of the uterus, than in those which affect the whole organ.

"The engorgement which has commenced by one or more small tubercles, may be considered as being essentially scirrhus: its prognosis is fatal." p. 209.

With regard to the treatment of the hard engorgements of the uterus, bearing in mind that they result from an exaggeration of vitality in the fibro-cellular tissue, depositing more or less concrete matter into its meshes or interstices, the product of morbid secretion, the indications, according to Dr. Duparcque, are—

"1st.—To dissipate or remove from the diseased organs, the material elements of the alteration.

"2d.—To modify or destroy the exaggeration of the secretory or nutritive functions, by which these elements are sepa-

rated from the blood, and assimilated to the affected organ.

"3d.—To excite or favor the absorption of the deposited morbid matter." p. 211.

The first indication is fulfilled,

"1st.—By subtracting from the general mass, by the lancet, by leeches, and by scarifications and cupping glasses.

"2ndly.—By directly disgorging the vascular system of the diseased part, by the immediate application of leeches.

"3rdly.—By moderating the activity of the circulation, either in a general manner, as by the use of diluent drinks—of digitalis—nitrate of potass—by absolute repose, of the diseased organ in particular—by giving a horizontal posture to the body—or by inclining it in such manner, that the affected region will be on a more elevated plane than the rest of the body.

"4thly.—By inviting or directing more especially, the circulatory action upon other parts, more or less remote, an effect which local derivative bleedings, dry cups, cutaneous frictions, hot baths, sinapisms, &c. produce." p. 213.

Our author, as has already been intimated, is a most determined depletor, and from bloodletting he appears to have derived the most satisfactory results in the treatment of hard engorgements of long standing, which had been considered as incurable. He supposes it acts not only by retarding or depressing the movement of composition, increasing thus that of decomposition, but also by subduing the *inflammatory state*, whose persistence opposes an insurmountable obstacle to the action of the most powerful resolvents. The following are his views with regard to the employment of bloodletting.

"The number of bleedings which we ought to make, and the quantity of blood which should be drawn, should be in proportion to the age, temperament and strength of the subject, and based upon the degree of the predominancy of the congestive phenomena, or local inflammation, and upon the general state of reaction. Small bleedings from eight to twelve oz., but frequently repeated, are infinitely preferable to more abundant and less frequent bleedings. Producing or maintaining by these means a more substantial derivation; the fluxionary or congestive movement which tends to per-

petuate or increase the engorgement, is more successfully counterbalanced. Sufficient strength should be preserved, that the patient may endure the sometimes inevitable length of the treatment, as this strength will be useful at a more advanced period, in order to preserve or excite an advantageous general reaction. The most favorable period for bloodletting, is a few days previous to menstruation, and also shortly after it. Previous to this period, bleeding moderates the menstrual molimen, and congestive movement, which we have said to be cause of the exacerbation of the disturbances and the progress of the engorgements in most of these cases." p. 223.

Our author prefers bleeding from the arm and thinks it more derivative than from the anus or foot. General bleeding may be seconded by cups with scarifications over the lower part of the abdomen, the loins, or even to the thighs; and by leeches to the same points, but above all to the os uteri itself:

"A means by which I have obtained the most happy effects in cases of engorgements, either of the body, or of the neck of the organ, even when we had suspected them to be of a *scirrhous* nature, and when they have already resisted the treatment ordinarily indicated in this dreadful affection. The rapidity with which the resolution is effected by this kind of application, is such, in certain cases, that it is necessary to have the evidence of it—not to be tempted to accuse of prepossession or of exaggeration, him who should announce such facts." p. 228.

This commendation of leeching the os uteri is so strong, and really the good effects obtained in some of the cases related were so strking, that we should be tempted to make trial of it, had we a suitable opportunity. But in the first place, leeches are difficult to be procured in Western practice, and secondly, were this difficulty removed we should encounter an almost insuperable barrier in the modesty of our females, to whom such a process would appear as revolting as novel.

Other measures may be made to concur very efficaciously with the abstraction of blood, in the fulfilment of this first

indication; such as abstemious diet, repose, position, evacuants, revulsives. On all these our author remarks very sensibly, and some of his observations are worth repeating. Some practitioners entertain such confidence in the resolvent and all subduing power of abstinence, as to trust to it chiefly for the cure of most, obstinate chronic diseases, and there is no doubt that the *cura famis*, as such rigid discipline has been called, has had a certain degree of success. But it may be too exclusively confided in, and pushed to an unmerciful as well as dangerous extent. When a patient, for example, who has been accustomed to full diet, is placed at once on an allowance of *chicken water*, and lest his famished stomach should make too much of even this, ordered to take *an emetic every evening*, he is submitting to an indiscreet experiment, calculated to test his tenacity of life, which may terminate in irretrievable prostration. Our author very judiciously observes:

"In all cases of chronic affections, it is not expedient to subject the patients suddenly to a rigid regimen. It must be done gradually, and be continued in proportion to the general state of strength, to the habits of the patient, and to the degree of intensity or tenacity of the alteration." p. 237.

A bland, easily digestible diet of milk and vegetables is best suited to the chronic phlegmasiæ. The repose recommended should be absolute, in a horizontal position, with the pelvis rather elevated to prevent passive congestion in the uterus. Great benefit may be expected from this, and it will frequently suffice to restore the uterus when prolapsed to its normal place; Dr. D. says it *always* suffices, which we very much question, unless the repose were literally absolute and long protracted. In some of these cases, the prolapsus, though secondary, will persist after the resolution of the engorgement, and the pessary must be applied to enable the woman to take exercise with any comfort or safety.

Evacuants, including disphoretics, diuretics, mild cathartics, and all medicines acting on the secretions and exhalations, may be advantageously prescribed. Cutaneous revulsion by sinapisms, frictions, flannel clothing, dry cups to the sacro-lumbar region, the pitch or tartar plaster, issues, &c. will aid powerfully in relieving the uterus from the sanguine fluxion, tending to keep up the engorgement.

The second indication requires the administration of remedies which act on the nervous system, and through this exert a soothing influence on the diseased part, whose vital actions are exaggerated. To this class belong the different narcotic substances, cicuta, belladonna, stramonium, hyoscyamus, lactucarium, &c. all of which have had their advocates, and have been used with more or less benefit in schirrhous and cancerous affections. Dr. Duparcque relates a case of ulcerated cancer of the left mamma, which had resisted every mode of treatment, but cicatrised completely after hemiplegia of the same side, accidentally supervening. This establishes very conclusively the control of nervous influence over morbid as well as healthy secretory or nutritive action, and authorizes the expectation that our most valuable remedies in such cases may be found among narcotics, or modifiers of innervation. Among these, cicuta enjoys pre-eminent reputation: M. Recamier affirms that he has witnessed the resolution of scirrhous and other engorgements not only of the uterus, but the liver, spleen, breasts, testes, &c. by the extract of cicuta, prepared by the vapour of vinegar or alcohol. Dr. Duparcque does not think that much is to be expected from it alone, but conjoined with abstinence, he believes, we may calculate upon success which would appear marvellous.

Dr. Duparcque has derived much advantage from emollient and anodyne medicines, conveyed directly to the diseased

organ, by injections per vaginam, especially when the neck is affected. Decoctions of marsh mallows, flaxseed, &c. with poppy heads, stramonium, cicuta, henbane, tincture or aqueous solution of opium, or the salts of morphia, are recommended, and to insure their retention for some time, the decoction is thickened with starch or barley. With the same view of acting on the nervous system and moderating its influence, as well as to produce derivation to the skin, the hip bath or tepid general bath continued one, two, or three hours is a favorite prescription with our author. We know that all these are regarded as bagatelles by most American and English physicians, but we are not the less persuaded that they are most useful auxiliaries in the treatment of many chronic diseases. The alleviation of painful sensation, and the substitution of pleasurable excitement of the nervous system, radiate a soothing and healing influence co-extensive with its distribution. We have no difficulty, therefore, in crediting the following statement of our author:

"I have sometimes seen the most appropriate treatment of the disease, and upon which I had a right to found hope of success, fail, in consequence only of the patient being tormented by domestic cares, by contradictions, and disturbances of various kinds, fatigue in social duties, and particularly trouble, chagrins, and every violent emotion, grave or gay, painful or only disagreeable, which the habits of a city life frequently give rise to." p. 254.

The third indication calls for the use of resolvents, properly so called, which Dr. D. divides—

"1st. Into those which modify the morbid materials in their physical state or in their composition, in such manner as to render them more easily resorbable.

"2ndly. Into those which by the action they exert upon the organic net-work of these alterations, develop or awaken the absorbing faculty in them." p. 255.

Of those which belong to the first division some act *physically*, as emollients, others *mechanically*, as compression,

and others again *chemically*. We attach very little importance to such remedies. Compression is undoubtedly an agent of considerable powers in external engorgements, but it cannot be applied to the uterus; it acts, we should think, by exciting the absorbents, rather than on the morbid material to be taken up. Potass and the soapy preparations are supposed by Dr. Duparcque to be taken into the circulation and transported to the diseased tissue, where by a chemical action on the morbid material deposited in its meshes, it is rendered more easy to be absorbed. The explanation of the modus operandi may pass for what it is worth,—we shall not take the trouble to defend or refute it; but the experience of our author is entitled to be heard.

"The success obtained from the persevering use of saponaceous pills in visceral obstructions and other engorgements, is founded upon too many facts to be doubted. We have ourselves often derived benefit from their use in various chronic engorgements, and we think we ought particularly to attribute to these medicines a favorable effect in the hard engorgements of the uterus." p. 258.

The most approved remedial agents belonging to the second division, or those which act by exciting the absorbent vessels, are *mercury*, *iodine*, *arsenic* and *tartar emetic*. With regard to mercury, Dr. Duparcque states that it often fails and seems to give favorable results in cases of hard engorgements of the uterus, only where there was reason to suspect the patient had a venereal taint. Of iodine he does not speak very favorably, and thinks that when it has displayed any resolvent effects, these are ascribable to the emaciation which it produces by exciting inflammation in the gastro-intestinal mucous membrane, thus suspending the digestive function. If this opinion be well founded, there is but slight encouragement to use iodine in these cases.

The tartar emetic, used endermically in the manner already described, has appeared to contribute much towards exciting

resolution. The employment of arsenic he considers dangerous, and the advantages which have been derived from it in the treatment of scirrhous affections are far from compensating the serious accidents which it may occasion. Dr. Duparcque very judiciously remarks that these resolvents are stimulants or irritants:

"They are therefore improper before depressing the vitality of the engorged organ, and arresting the development of the alteration by the previous use of medicines for the two primary indications. Otherwise, not only will these medicines fail, however heroic they may be, but they may produce effects the opposite of those which were intended. If on the contrary, they are had recourse to only, when the alteration is disposed by treatment appropriate to its nature, fully to receive their action, it is probable that success would be more frequent with them than at present." p. 268.

Accordingly, these remedies with the exception of tartar emetic, do not figure prominently in the cases he has published, which were generally treated successfully by the measures required to fulfil the first and second indications. In fact, antiphlogistics and anodynes, by subduing inordinate secretory action, promote absorption and thus act indirectly as resolvents.

Such is a summary of the treatment recommended by our author, in hard engorgements of the uterus.

A number of cases are circumstantially detailed, confirmatory of its efficiency even when superficial ulceration accompanied engorgements of long standing. From these we select two, being determined in our choice by the brevity of their narration; the first is a case of chronic engorgement of the neck of the uterus, the second of chronic metritis involving the whole organ.

"Madame H———, aged 30 years, of a small stature, but very muscular, had prolapsus uteri, commencing three and a half years since. When she was delivered of her second child, she attributed her indisposition to the circumstance of

her having carried some furniture very soon after her accouchment. Since then she has felt painful draggings in the loins and stomach, heaviness upon the rectum, and the approaches of her husband have been very painful to her. The catamenia were gradually reduced to nothing. The midwife who had accouched her, recommended a pessary, which she could not wear in consequence of the violent pains its presence produced in the loins. In the meantime, by the advice of M. Dupuytren, she replaced it, but she was soon obliged to withdraw it again. Many attempts having been unsuccessful, she bore her disease in patience. But the suffering and constraint which she experienced, the impossibility of raising any heavy body, and the inability even to make her bed as customary, induced her to revisit M. Dupuytren, who advised the repetition of the pessary, or a state of pregnancy. The attempts to procure the latter object having greatly augmented the inconveniencies, I was requested, 11th July, 1818, to place a pessary, thinking I had the address to do it without occasioning suffering; but the state in which I found the cervix uteri, prevented me from complying with the wishes of the patient. The part was very much tumefied, hard, very sensible to the touch.

"I thought that the disturbances which the patient experienced, and the prolapsus itself, might readily depend upon this engorgement.

"I immediately confined the patient to her bed, and advised her to keep it for a month at least. I directed her to be bled from the arm every eight days, to the amount of eight oz. each time. She was subjected to a soft and moderate regimen. At the end of four days, the uterus returned to its natural place, when I prescribed emollient injections, and baths every two days. Every four or five days, the patient took a spoonful of castor oil, which was sufficient to excite two or three operations, and overcome the constipation which had troubled her.

"Two days after I commenced the treatment she menstruated, though in much less amount than usual.

"At the next period the discharge was much more abundant, but continued only for one day; the cervix uteri had diminished one third, and was pliable. She was bled twice about this time.

"At the third period, the cervix, which had almost returned to its ordinary form and volume, became tumefied; in the meantime the sanguineous discharge continued all day, (7th September) in sufficient abundance: the next day eight oz. of blood were taken from the arm.

"The patient, who had a good appetite, and who felt her strength renewed, left her bed contrary to my wishes. No accident however occurred. At the next period, the menses continued full two days, as much as at other times. Finally, the fifth period, they did not appear, and the patient visited me, fearing a relapse. But the *touch* proved the cervix to be in a good condition. I suspected the commencement of pregnancy, which in fact existed.

"Her accouchment took place at full term, and as easily as at the two preceding; but by way of precaution, I kept the patient in bed fifteen days, and I did not permit her to go out and attend to her business till after the expiration of six weeks. Nothing particular has since occurred in relation to the uterus." p. 289.

"Madame B———, tall and slender, cleared up her room, fifteen days after a long and severe labor, which had left an engorgement in the uterus; two months and a half after that, I saw the patient again. The uterus presented a tumour in the hypogastrium, which was hard and painful to pressure; the neck was also hard and effaced; the infundibuliform orifice, partially open, permitted the escape of a reddish serosity, in considerable quantity. To the heaviness and lumbar pains were added frequent and spontaneous vomitings, alternate flushings and paleness of the countenance, with great alterations of the features. There was evidently chronic metritis. I confined her to her bed, ordered eight bleedings, copious at first, and successively diminished, to be performed in eight days. Two hundred leeches were applied in several times upon the hypogastrium; emollient applications, mild injections, and a severe regimen, constituted the rest of the treatment.

"At the expiration of two months, resolution was almost complete, but the neck of the uterus remained still engorged and hard. The general debility was too great to allow us to persevere in the antiphlogistic treatment, and I employed antimonial frictions.

"Fifteen days after, during which three ounces of the ointment, and consequently three drachms of the tartar emetic had been used, the neck became elongated and softened, and returned to its natural state.

"Madame B. has since had three children." p. 305.

After noticing very briefly melanic and cerebriform degenerations, the former of which he has never seen in the uterus and the latter cannot be detected in the living subject, our author concludes his work with an account of the different

forms of ulceration, which are met with in the uterus, and the medical and surgical treatment appropriate to them. He enumerates—

"1st. Primitive ulcerations which are superficial and without especial engorgement of the tissue they invade.

"2ndly. Primitive ulcerations having a tendency to extend themselves more deeply, and make indefinite progress, without there always being necessarily profound engorgement of the tissue in which they occur.

3dly. Primitive ulcerations with a hard base, more or less thickened, but in general superficial.

"4thly. Secondary ulcerations with a base primitively and profoundly altered; hence, we have four species of ulcers: 1. Simple ulcers; 2. Chancrous ulcers; 3. Carcinomatous ulcers; 4. Cancerous ulcers." p. 338.

The simple ulcer is observed upon the neck of the uterus only; and involves merely the mucous membrane, which it appears to have eroded. Its edges, of a red colour, are slightly prominent and its surface, which is smooth, is covered with a yellowish, finely granulated layer, from which a puriform, sometimes sanguinolent fluid exudes. Dr. Duparcque conjectures that these ulcerations often exist and disappear without being suspected, but that by their continuance they may lay the foundation for more serious alterations. This species of ulceration may pass for slight leucorrhea; but whenever the patient complains of deep seated burning sensation, pruritus, and the discharge is tinged with blood after coition, it may be suspected and an examination by the *touch* or speculum should be made. Its treatment is simple and certain. Bleeding, if there is much local excitement, mild, emollient injections per vaginam at first, which may be afterward rendered detersive by the addition of a little sugar of lead, sulphate of zinc, &c. attention to the bowels, and the avoidance of excitants, especially sexual intercourse, produce prompt cicatrization.

The *chancrous* ulcer differs from the preceding by being

deeper and appearing to be "dug out" of the substance of the os uteri. Its bottom is covered by a greyish lamina, which is alternately detached and renewed. It is attended by piercing, burning, lancinating pains, and the discharge from the vagina of a sero-mucous fluid, either red or green, irritating the parts with which it comes in contact, producing erythema and troublesome itching. It is most commonly of syphilitic origin, and requires mercurial remedies, aided by proper local applications. Small doses of the deuto-chloride of mercury, with decoction or extract of sarsaparilla, and emollient injections; after the inflammatory excitement is allayed, injections of the chlorides of soda and lime, constitute the best treatment. If the ulcerations resist these remedies, cauterization with the nitrate of silver has been resorted to with success.

The *carcinomatous* ulcer differs from ulcerated cancer, according to our author, in that it commences by ulceration and the engorgement at its base is secondary; whereas in cancer proper, there is schirrhous engorgement first, and secondarily, ulceration. The carcinomatous ulcer may succeed to simple and chancrous ulcers, neglected or badly treated. Dr. Duparcque expresses the opinion that these ulcers have been mistaken for genuine cancer, and, yielding readily enough to proper treatment, have been reported as cases of confirmed cancer cured. Carcinomatous ulcers are more extensive than deep, and repose upon engorgements inconsiderable compared with those of true cancers. They require constitutional and local antiphlogistic treatment, followed by injections of the chlorides of soda and lime, and cauterization; and if these fail, the removal of the diseased part with the knife.

The chapter on "confirmed cancer of the uterus," though in some respects interesting, hardly deserves an analysis. Our author has most uselessly multiplied the species of this

non-descript affection, and for any practical advantage it can subserve, his nomenclature is not worth repeating. How indefinite are our notions of cancer! No two writers scarcely agree as to what constitutes it or in what it essentially consists. Perhaps, our author's definition is as good as any other:

"We give this name," says he, "relating to the organic alterations of the uterus, to all those which offer in common the following characteristics: 1st, tending to make indefinite progress; 2ndly, tending to terminate in a fatal manner; and 3rdly, to be in general beyond the resources of all medical treatment." p. 355.

One of the characteristics of confirmed cancer, then, being its incurableness, its prophylactic treatment becomes an exceedingly interesting inquiry, and if it shall be found that in the greater number of cases it commences with engorgements that may be resolved, as our author alleges, this frightful malady will be stripped of much of its terrors, and the work we have reviewed, be hailed as one of the most precious contributions ever made to science and humanity.

With regard to the surgical operations that have been proposed and executed for uterine scirrhi and cancers, Dr. Duparcque's estimate of them may be condensed in a few words, and our own views coincide with his. These operations are *resection of the os uteri* and *ablation of the entire organ.* The first is an operation that may be performed without much difficulty, but it should never be thought of until the resources of well directed treatment have been exhausted, and has often been most wantonly performed. The second is a barbarous operation, which has so generally served no other purpose, than to abridge the sufferings of the patient, by bringing death to her rescue, that the surgeon, who practises it now, can scarcely be regarded in any other light than that of the merciful executioner, who knocks an

animal in the head to terminate its mortal agony. When the uterus has suffered profound degeneration and is converted into a disorganized mass, we can never have any assurance of the well-doing of the patient, should she survive its extirpation: for, the disease must necessarily be propagated to the contiguous parts, by purulent absorption and the extension of inflammation. We doubt, therefore, whether the cases in which the patients survived the shock of the operation, can be justly appealed to as trophies won from death, because they have been reported before sufficient time had elapsed to reveal the working of the lurking venom.

"Once developed," says our author, "confirmed cancers are even now, beyond all the resources of medicine; surgical treatment itself, which offers some favorable chances when the disease is limited to the neck of the uterus, becomes inefficacious when it affects all or a part of the body of this organ." p. 443.

With this, we close our review of the work of Dr. Duparcque, which, we do not hesitate to predict, will curtail the mortality of the important class of diseases it embraces, by urging physicians to greater accuracy of diagnosis and more efficient treatment, at a period when alone their interposition can avail. Duty impels us to say a word in relation to the merits of the translation and the typographical execution of the work. The translation, though generally conveying, with sufficient clearness, the meaning of the author, is too literal—too much trammeled by the idioms of the original, to be graceful or elegant, or even pure English. For mere defect of *style*, however, the translator may easily be forgiven, in consideration of the dryness of his task and the value of the *matter*, which he has rendered accessible to his brethren. But we have not enough of the milk of kindness in our composition, to forgive the typographical errors with which the work is replete, for, these ought to have been guarded against.

They are petty annoyances which destroy the equanimity of readers, unless they merit indeed the epithet "gentle," formerly indiscriminately bestowed by good-natured authors.

H. M.

A Practical Treatise on the management and diseases of Children. By Richard T. Evanson, M. D., *Professor of Medicine*, and Henry Maunsell, M. D., *Professor of Midwifery, in the Royal College of Surgeons in Ireland.* Haswell, Barrington & Haswell—Philadelphia, 1838.

This branch of medical literature, is in many respects behind the times, and we should be glad if we were enabled to say that the work before us had materially brought up the laggard steps of our philosophy in this department. But though it has not in any remarkable degree accomplished this object, still there is something in it deserving notice, and we shall extract and comment on such features as are deemed most important and interesting. The work bears testimony to considerable haste in its execution, and we regret that such is the fact, for being intended to supply a *desideratum* upon a very important branch of our science, it should have been prepared with the utmost care, and under the highest advantages which the improved means of medical philosophy, are now furnishing all departments of the profession. Their stations too in the Medical Schools of Dublin, gave them a fine opportunity for usefulness. But neither its literary merits, nor its general pathological views are by any means equal to what we should have anticipated, from the elevated position occupied by each of the authors. There is a disposition to run after far-fetched meanings of words, instead of

using them in their ordinary acceptation; as is instanced in the remarks upon the changes of respiration, in the following sentence—"the respiration gradually parting with the attributes of *puerility*," which is quite a strained use of the word puerility. Vulgarisms too, meet the eye in the very introduction of words, such as "gum-fleam," "hippo," &c. too frequently to be pleasing. But that there are redeeming merits in the performance, we shall endeavor to show, and proceed to the work at once.

CHAP. 1st. *On the peculiarities of the infant Structure and Constitution.*

Under this head, the following subjects are treated with much ability and at times with elegance. 1st, General Considerations; 2nd, Digestive Organs; 3rd, Organs of Respiration; 4th, Organs of Circulation; 5th, Cerebro-Spinal System; 6th, Locomotive Apparatus; 7th, Growth.

We cannot stop to give even a summary of the views on all these interesting topics, but the remarks upon the cerebro-spinal system are too practical in their bearing to pass over. We give place to an interesting portion of them.

"The cerebellum is at birth somewhat more advanced in organization than the brain; but it is about the period of puberty that the relation between the cerebrum and cerebellum undergoes the most remarkable change, the latter becoming considerably augmented in relative size, being then nearly twice as large, in proportion as it had been at birth.

"The spinal marrow is largely developed, like the brain in the infant, but appears to be more matured in structure, and farther advanced in the performance of its functions.

"The general sensibility is acute, and the nervous susceptibility in the infant remarkable; so that all impressions are violently felt, and sympathetic affections are presented in a very aggravated form, and are very prone to occur, constituting a peculiar feature in the infant constitution, which may be emphatically said to be nervous. The large endowment of nervous matter, and its peculiar susceptibility of

impression from the softness of its texture, appear to confer this quality, which is never to be lost sight of in the treatment of infantile disease—a remark as old as the time of Boerhaave, but which is nevertheless too frequently forgotten.

"As the infant grows older, the brain becomes capable of perceiving impressions made through the senses. Signs of intelligence begin to be manifested: the infant takes notice, and becomes sensible of the qualities of bodies, recognizing them and exhibiting symptoms of gratification or annoyance. The nerves of sensation, however, though freely developed, are as yet but imperfect in their functions, and inadequate to the conveyance of their appropriate impressions; while we find that the apparatus by which the external sources of these sensations are supplied, is more or less imperfect, and destined to undergo much alteration." p. 16.

These observations are followed by a detail of the progressive steps of sensation—the spring from apparent chaos, to partial intellection, and then onward to the highest developments of mind in the child, are sketched with a full knowledge of the subject in hand. But it is less important to the mere physician, than the following just views, under the head of Growth.

"A very small head is usually accompanied by feebleness of character; but the head may be large, and the person dull, or even idiotic,—the deficiency existing in the structure, not size of the brain.

"The advance of growth in the brain does not seem to proceed equally, either as to size or structure, in all parts. Vimont notices, that the increase of size, during the first months, is most remarkable in the parts situated at the base of the skull, and occupying the anterior and inferior regions of the frontal bone: while, of the cerebral convolutions, those soonest acquiring firmness of structure are placed in the lateral and middle parts of the base. All know that the cerebellum does not acquire its full development, until about the period of puberty.

"The head varies with the progress of growth not only in size, but shape,—the different regions of the brain being found to bear a different relative proportion at different ages—particularly during youth; while at all periods there exists a certain degree of individual peculiarity.

"Not less remarkably do we observe a certain order or relation in the successive development of the several moral and

intellectual powers: which is, doubtless, dependant upon this relative advance in size or structure in different parts of the brain, though not yet directly connected therewith—observations for determining this point having been but partially made, and the importance of the subject not yet duly appreciated.

"However this may be, it is certain, that the disposition and intellect are gradually unfolded: and that attempts to force the one or the other before its appointed time and proper progression, are sure to be attended with injurious, if not dangerous consequences. The reason is obvious and physiological; because, what is called the cultivation of the mind, is in truth but the exercise of the brain; and this, like every other organ, if overtasked, will be worn out or destroyed.

"In noticing the development of the intellectual powers, we see that the child observes before he reasons—that the perceptive faculties come into play before the reflective. The child early observes and recollects things, and the qualities and relations of things; and is inquisitive about events. He constantly asks what this or that is.

"But the senses advance still more rapidly than the perceptive faculties, and are thus prepared to furnish these faculties with knowledge of the various properties of matter. The differences to be observed, however, in the power of appreciating these qualities of bodies depend on differences in the constitution of the perceptive faculties—not of the senses.

"The eye may see well, and clearly perceive differences in size or form, and yet not be able to distinguish differences in colors: the ear that hears best, is not that which best appreciates those variations in sound that constitute melody.

"The various degrees of talent exhibited by some children more than others, depend much on the different degrees with which they are endowed with those faculties that take cognizance of the physical properties of things.

"In these qualities and relations of bodies we have the foundation of the physical and natural sciences; and for these sciences, (especially the latter,) mental capacity exists at a much earlier age than seems commonly supposed.

"The gift of language as a mental power, is that which earliest attracts attention, and is first cultivated. Hence, facility in this respect, with a quick observation, are taken as indications of great intellectual capacity. But the reflective faculties must be in full operation, to constitute a really good understanding; and these are always the latest to be developed, and often not very liberally bestowed.

"It is, indeed, upon a due balance between the reasoning

and perceptive faculties, that the superiority of the intellect will depend. Where the latter preponderate, they early show themselves, and give a quickness of apprehension, which, in a child, is often taken for superior talent. But the smartest boy does not necessarily make the cleverest man; there must be a full endowment of the reflective faculties, to give depth of thought, or soundness of understanding.

"When these faculties early preponderate, however, the child will be slow in apprehension, and may be esteemed dull; but when the period for their exercise arrives, powers will be exhibited which had not been anticipated. Peculiarities of disposition, moreover, will affect these results as much as differences in talent, though seldom, if at all, taken into the account. The child often exhibits (from the earliest age,) a marked disposition, as it occasionally does some peculiar talent. Almost from the moment of birth some infants are observed to be peevish, passionate, or obstinate; while others are gentle and affectionate, or timid.

"A determined infant may be seen to rule a weak parent, and even exercise an influence over a whole family. A very gentle child may never acquire sufficient force of character to make his way in the world, no matter how intellectual he may be.

"The higher sentiments, generally speaking, are the more slowly developed; and superior moral powers, as the sense of justice and religion, are among the latest to come into operation, requiring some assistance from the understanding for their direction and support.

"No doubt can exist that the child is endowed with certain powers, moral and intellectual, varying in different individuals, and constituting natural differences of character; but this militates not against the necessity for education or training, and the vast influence exercised thereby; on the contrary, it serves as a guide and a limitation,—pointing out what requires to be cultivated, and what to be repressed; and shows us what is possible to be done.

"How important, then, to acquire a knowledge of the primitive faculties of man, and the laws by which they are regulated in their natural development, or influenced by artificial training. Nor is the necessity for such knowledge confined to the system more immediately connected with mental manifestation. The same holds good respecting all the other systems in the body; for without due attention to each, we shall not be able to do justice to any, or secure for the whole its best advantages during the period of development or growth." p. 22.

The high importance of sound, natural and philosophic principles of physical education, can never be too strongly enforced upon the attention of medical men, and yet we can safely appeal to the observation of all intelligent minds in the profession, for support of the truth, that upon no one subject belonging to the improvement of our species, has there prevailed a larger share of Vandalian ignorance. Until Phrenology indicated by its furrows, the fallow character of the field, which the metaphysician had turned out, scarcely any attention had been bestowed upon it. Since then however, an abundant harvest has been gathered, and we have reason to hope that the subject will be cultivated in proportion to its vast merits. A few skilful pioneers have blazed a pathway, and if zealous and industrious cultivators follow now, a vast enterprize opens at once to the view, and one which will richly reward a heavy expenditure of labor. But medical men must not expect to have any influence upon society, in these things, until they are able to second their views by extensive and ample knowledge of the subject of a character to commend itself at once to the enlightened judgment of an intelligent, thinking and observing people, and it will be found that accuracy in the truths of Physical Education, is almost, if not quite as important to the benefit of the human family, as a correct understanding either of Anatomy or Physiology. This is evident, we think, from the mere shadowing of the subject in the above extract, and with the view of inviting attention to it, we have made a lengthy quotation.*

We pass to another step in the gradation of physical education—a concise account of the features of the temperaments:

* A very interesting work on this neglected science, was published a few years since by Prof. Caldwell, now of the Louisville Institute. It is very deservedly spoken of in the most encomiastic style, by the leading European Journals of medical science.

"A remarkable difference is often to be observed in the degree of development, or proportional growth of one organ or system of organs more than another. In some children the head is very large, and great liveliness and intelligence are early displayed, the cerebro-spinal system of nerves being that which preponderates; and this lays the foundation for a particular temperament, which, according to the rational view of M. Thomas, would, in this instance, be the nervous temperament.

"In other children, great muscular power is early displayed, the chest is large, the body well nourished, and the complexion florid. This constitutes the thoracic, or, as it is more commonly called, the sanguineous temperament—the circulatory system predominating. The child is strong and active, but not particularly intelligent.

"When the abdomen is very large, and the circulation languid,—the child being pale, indolent, and dull, with a large appetite, but little activity of mind or body,—the abdominal organs preponderate, and the temperament is abdominal or lymphatic.

"Other varieties of temperament exist, and in some individuals no temperament is strongly marked, or more than one are mixed together. But attention to the subject is important, as modifying our plan of management both in health and disease.

"These varieties of constitution may be born with the child, and looked on as hereditary: but they will be much influenced by the manner in which the individual is managed; according as one system of organs, or another, is exercised or neglected.

"The great principle that should guide us, is to afford to all and each its proper or appropriate share of exercise or occupation, so as to strengthen the weak or ill-developed organs; while we repress those that are disproportionately developed, or over active, by consigning them to quiescence. To be enabled to do this, however, we must study the subject as physiologists." p. 24.

This is indeed a series of meagre views of a most important matter, and we shall not shun the temptation of spreading before our readers, a set of broader, fuller and more complete observations on this interesting theme. We quote from a very valuable little work by an American author,* and we

* "Thoughts on Temperaments," by Charles Caldwell, M. D., &c.

invite a comparison of the reasonings of this Treatise, with those of Dr. Pritchard on the same subject, and we think it will be sufficient to settle the question against the humoralists and in favor of the phrenological deductions. After a lucid analysis of the laws of animal life, and of mind, the author says:—

"From the preceding views it clearly appears, that the comparative standing of individual man, as relates to his race, is graduated by the predominance of his leading organs. Do his abdominal viscera preponderate? He has much of the animal in him, and his grade is low. Are his thoracic viscera most highly developed? His qualities are of a superior order; but he still partakes too much of the animal. Does his cerebral system predominate; and is it well developed in all its parts? He rises above the sphere of animal nature, and stands high in that of humanity. He is formed for an intellectual and moral being, with no more of animality in his constitution, than is necessary to give him practical energy of character." p. 246.

The following is Prof. Caldwell's division of the temperaments and they are of a more philosophic caste in our estimation, than those we have quoted from Dr. Evanson:

"1, The mixed or balanced, in which the ruling organs are in fair proportion to each other; 2, The encephalic; 3, The thoracic; 4, The abdominal; 5, The encephalo-thoracic; 6, The encephalo-abdominal; and 7, The thoracico-abdominal. Before entering on the consideration of these varieties separately, it is necessary to observe, that they are not altogether permanent. They change, intermix, and are, in some cases, even converted into each other, at different periods of life, from infancy to old age." p. 251.

With the enumeration of these varieties, we must close our notice of this subject, and we do so by urging medical men to devote enough of their time to a consideration of it, to thoroughly master it. Its proper appreciation can never be made, until the subject is fully understood in all its relations.

We pass to the second chapter of the work, "*on the management and physical education of children*," which is divided

into sixteen considerations, of each of which we shall give a very summary view.

I. *Management immediately after birth.*—After having separated the child from the mother, by the division of the cord, the following are the main indications addressed to the accoucher: the infant may very properly be exposed, *a short time*, to the action of cold air, because "the production of pain is a necessary consequence of the access of air to the surface of the body; the vivifying influence of which, as we learn from the ingenious researches of Dr. Edwards, is calculated powerfully to counteract the greater or lesser degree of insensibility induced during birth. The pain, also, by exciting the infant to cry, contributes materially to the perfect expansion of the lungs by air; the non-effecting of which, as we shall subsequently find, is not unfrequently attended by fatal results." This exposure, we have said, should be but for a short time, for the researches of Dr. Edwards, "upon the influence of physical agents on life," have exploded the notions about hardening young children by external cold. The facts, that the heat of mature infants at birth is from 3° to 5° less than that of adults, and the power of evolving heat, being at its minimum in all young animals, seem to be conclusive upon the necessity of keeping very young infants warmly clad. The next step, after having accomplished the expansion of the lungs, is to remove the vernix caseosa, as it would be injurious to remain, "intercepting the vivifying influence of the air," already alluded to. And therefore we question the propriety of Dr. Eberle's advice to delay the removal of the caseosa, in the case of feeble manifestations of life. More would be gained by its removal in such cases, as the exposure of a large surface of skin to the action of air for a few moments, will be more likely to quicken sluggish, into active life. For the removal of this

substance an albuminous application is best, such as egg, and the surface should then be cleansed with warm water. The authors recommend the umbilical bandage to be cut bias, so as to yield some to the varying conditions of the abdomen, and the general clothing, such as to protect the infant from atmospheric vicissitudes, and at the same time, not impede the natural movements of the limbs and subsystems, especially the thoracic.

II. *Food and medicine immediately after birth.*—The exhibition of purgative medicines for the removal of the *meconium* is very properly deprecated, and the cathartic property of the *colostrum* is denied. We think ourselves, that its possession of such a quality, is not proved, and yet there is some foundation for the idea. If the child is not applied to the breast, and the *meconium* is not removed naturally in the course of a few hours, it is more difficult to bring off, even with purgative medicines. The infant should be permitted to sleep without food, for ten or twelve hours. Prof. Jorg recommends lukewarm water alone as food, until the breasts of the mother are capable of giving the appropriate nourishment, and the recommendation is endorsed by the writer of this section of the work.

III. *Food in the first period.*—Our authors recommend that the child should not be put to the breast until there has been "*some* secretion of milk," lest the disappointments of the child, from ineffectual attempts, should cause some difficulty in getting it afterwards to take hold seriously. This we apprehend, is misplaced caution—hope deferred maketh not the infant sick, and the influence of the drawing of the mammæ upon uterine atony, is too great to be lost by strict obedience to the above directions. During the first six or seven months, the child should be restricted to the nourishment supplied by the mother's breasts—after the teeth begin

to appear, other food may occasionally be used—such as light bread, steeped in hot water, with the addition of a little sugar and cow's new milk. A regular habit of suckling the child every four hours through the first period, will conduce to the health and growth of the suckling, and add to the comforts of the mother. But after it begins the use of other food, three or four times a day and night will be sufficient. It is desirable not to accustom the child to receive any artificial nourishment, during the hours allotted to sleep. The proper regulation of the diet of very young children, should be imperatively attended to, by the physician, because inattention to this, and the foolish custom of gorging them, is productive of a train of evils, which may easily be avoided by proper management. The great principle, is "not to let the infant want nourishment, which will agree with it," and to stop feeding it, whenever it is satisfied.

IV. *On the choice of a nurse.*—Here we find nothing remarkably worthy of attention, and the sections on Artificial feeding, Weaning, Food in the second period, Cleanliness, Clothing, Sleep, Exercise, Medicine, Light, Air, Temperature, Mental and Moral Education are of the same character, though discussed with ability, but they are thrown into the shade, by the superior attractions of a practical caste, of other portions of the work. With a valuable observation on premature excitation of the brain, we close our notice of this chapter. It is under the head of Mental and Moral Education. Dr. Maunsell says:—

"As general conclusions from the views we have put forward, we would say, that during childhood (*i. e.* until the eighth year,) education should have for its main object the cultivation of the moral qualities; and that, during the same period, the intellect will be pretty fully occupied in obtaining such most necessary information as can be acquired by the use of the senses without much *formal* assistance, and therefore that schooling, properly so called, should not be

commenced, at the very earliest, before the termination of the sixth year. Until then, the confinement of a school is injurious to the bodily health, and not required for mental improvement of the child. In coming to these conclusions, we may appear to undervalue those useful inventions of late years,—infant schools. We conceive, however, that they have a specific purpose, and that, when well-regulated, they effect that purpose usefully—viz., to take charge of the children of the poor in large cities, when their parents are engaged in their daily labor, and unable to attend to their wants. In this view, their value is inestimable; but still they are but the substitution of a lesser for a greater evil: all the ties of social affection, of well-regulated obedience, and of mutual co-operation, which constitute the bonds of society, are learned by the infant in the domestic circle, and can be learned no where else; and if we can leave it in the care of an intelligent mother, and in the society of its brothers and sisters, we should not send it to an infant school, where it is governed by and associated with strangers, with none of whom it is likely to have natural sympathies. What the child may be expected to gain specifically in these schools, beyond mere protection, can only be regularity of habits, which certainly is of great importance, but not so great as to countervail the advantages of a well-regulated domestic circle. For the reasons we have advanced, we conceive that infant schools, though most serviceable in large cities for the poor, are totally unfitted for children of more opulent parents. With the latter the system might be characterized, as Dr. Chalmers has done another artificial system, as "a taking to pieces of the actual framework of society, and re-constructing it in a new way or on new principles—which is altogether fruitless of good, and often fruitful of sorest evil, both to the happiness and virtue of the commonwealth." p. 54.

CHAP. III. *Peculiarities of Disease in Infancy and Childhood*—1*st*, *Etiology;* 2*nd*, *Diagnosis;* 3*rd*, *Prognosis.*

This chapter is well written, abounding with much matter of great importance to the practising physician. But the reflections are so compactly put together, that we cannot extract from it, without doing some violence to the subject, and in lieu of an abstract, we recommend this portion of the work to the especial attention of young physicians, and assure them they will find in it a great deal of excellent

matter, which they cannot meet in a similar compass, any where else.

CHAP. IV. *Infantile Therapeutics.*—I. *General Observations.*

Under this head are considered the characteristics of the action of medicine upon children, the best means of giving it, and some general remarks upon the value of corrections of the diet, &c. There is one observation however so eminently useful, and so frequently lost sight of, in the treatment of infantile diseases, that we cannot pass it over. Our experience is entirely corroborative of the remarks. We accordingly subjoin it without comment.

"Change of air exercises the most beneficial influence in infantile disease, often putting an end to protracted illness in a few days. With the child we can avail ourselves of this measure at an earlier stage of acute disorders than with the adult. Being brought abroad or changed to another room in the same house (if more elevated and airy,) will always be useful; and we cannot be too particular in insisting on the apartments of a sick child being kept cool and airy, at least sufficiently ventilated and of an equable temperature." p. 68.

II. *Mercury.*—The remarks on the use of this valuable medicine, in the diseases of infantile life, would scarcely offend that profound philosopher and scientific gentleman—Samuel Thompson, the founder of the steam system. The recommendations are to employ it in almost Homœopathic doses, and even they are to be adventured with all due caution and the most solemn fear of consequences. We look in vain for a solitary fact on this point, or a sound argument—the whole section partakes more of the nature of the *ipse dixit* style, than of either accurate reasoning, or philosophic deduction. But we cannot dwell upon the matter, for we are persuaded, the sound intelligence that pervades the minds of medical practitioners in this country in relation to the use of calomel in the diseases of children, will correct this thing of

itself, and if kept in its proper place, administered with a due regard to the circumstances of each case, and prudently managed, its beneficial effects will speak for themselves. We pass to the consideration of "*sedatives*" which occupies the third section of this chapter. The first paragraph runs thus:—

"Irritation is a usual attendant on infantile disease, which often arises directly from this source; and in all cases, nervous susceptibility to a greater or less degree is present. Hence we are prepared to expect much good from the employment of sedatives, which are often indicated, but concerning the use of which a very general apprehension appears to prevail. This has probably arisen from the injurious, or even fatal results, which have followed the administration of soothing syrups, &c. to young children by ignorant attendants. The ingredients of such compounds, or at least the quantity of narcotic which they contain, are seldom known; so that their employment even by the regular practitioner, is dangerous, independently of the objection that recommending such fosters popular prejudice respecting the ignorance or indifference of medical men about infantile disease. Hence the physician should always *formally* prescribe them; and from no class of medicines does more signal service arise, when judiciously administered to the child."—p. 69.

The prejudice against this class of medicines in the treatment of infantile disease, is founded in something deeper and broader, than the mistakes of nursing women—the experience of medical men in this country is decidedly against the employment of sedatives for children, except in rare and peculiar states of the system, because their particular direction to the brain makes their exhibition dangerous, and the effects of which have been well described by Dr. Clarke. In addition to this we are apt to lull the symptoms, and instead of fighting an open enemy, we create an ambuscade by the narcotic property of these articles, which greatly adds to the danger of the case. The utmost caution is necessary therefore in their administration, and a soundness of judgment which is only to be acquired by close observation and exten-

sive experience, must always guide the prescription of this class of remedies. There are combinations of symptoms however, which require "sedatives," and in their appropriate place, they are invaluable. In an exhausted state of the vital powers, when the acute stage of inflammation has subsided entirely, when there is a harassing vigilance, with a corrected condition of the secretions, they may, under proper caution, be used with eminent advantage. Sleep is all important to the sick child, but we must have due care in the use of sedatives, or we shall make it longer, than may be entirely agreeable to all parties.

The articles under this head, we enumerate according to the relative degree of merit, in the minds of the authors of the Book—Opium, Thebaic tinct. Laurel water, Dover's powder, and narcotic liniments. An enema of water containing one, two or three drops of laudanum, accordingly as the child is three, six or twelve months old, is recommended highly for the control of diarrhœa. We wish we could add our testimony in favor of this latter observation, but our experience with the enema is, that it is scarcely worth trying in the cases for which it is recommended.

We pass over the sections, on "Alkalies and Alkaline earths," and "Carminatives," and the next in order, is scarcely worthy of an extended notice. It is on *stimulants*, and their general use in infantile disease, is very properly condemned. The following remarks are however, worthy of remembrance: "When restlessness, spasms, or convulsions, arise from exhaustion, as in cases where depletion has been carried too far, or illness has been long protracted, a stimulant is most beneficial; but if used as an anti-spasmodic where such symptoms arise from an opposite cause; as they generally do, an aggravation of every symptom will be induced." Stimulants indeed are sharp edged tools, that cannot be managed

with too much care in the treatment of children; hence the value of the above cautionary reflections. The same remarks may be applied to Tonics—cases in which they are beneficial are much more rare, than their unfortunate employment. The prudent practitioner will however, under the guidance of principle, select the proper states of the system for the use of these medical agents, and under an enlightened judgment, errors of administration will be rare.

Antiphlogistic plan of treatment.—We quote the entire remarks in this section, preparatory to a notice of some of the agents employed in carrying out the views under this head. Dr. Maunsell says:—

"The class of remedies which we shall have most occasion to use in the treatment of infantile disease, is that which is employed to combat acute inflammation: and hence called antiphlogistic. These remedies act principally by depletion, or as evacuants; but we must not forget that a certain part of their action is stimulant,—especially exciting some organ or tissue, as the kidneys or skin, and so producing a diuretic or diaphoretic effect. This is most manifest in the case of cathartics, which often irritate the bowels, as well as purge,—thus acting more or less as counter-irritants, some of their remedial power arising from this source. This action may, however, be carried too far, so as to do injury by the special irritation thus produced, which may also prevent the expected evacuation, and aggravate, or even create, local inflammation. Much mischief arises from overlooking these circumstances in the treatment of childrens' diseases; for in consequence of the susceptibility of their organs, this irritative action is peculiarly liable to be carried to an injurious degree. Thus it is that we see intestinal irritation induced by purgatives given to children, until nothing but a little bloody mucus is evacuated; or stimulating expectorants employed, until expectoration has been suppressed, and a slight catarrh changed into a severe bronchitis.

"These errors we shall avoid by recollecting that the use of evacuant medicines is not necessarily followed by evacuation, as their names (purgatives, diaphoretics, &c. &c.) would imply, unless the necessary precautions be taken to ensure such results. These are, to employ only the least stimulating in the earlier stages of inflammatory disease, and to premise direct depletion when required."—p. 77.

The views on bloodletting are valuable, because they are practical in their bearing, and are based on truth. We give a summary of them. Venesection is considered the primary step in an antiphlogistic treatment, both because "of its power in subduing inflammation, and its ensuring the beneficial results of other remedies, most evacuants acting with more speed and certainty, where bloodletting has been premised." The rule for its employment is a very sound one: it is, "that we hold in view the relation between the necessities of the case, and the strength of the patient. Repetitions of bloodletting, are not well borne by children." On account of the difficulties attending the opening of the brachial veins, it is recommended that we draw blood "from the dorsum of the foot, back of the hand, or from the jugular vein." But on account of the trouble sometimes met with, in stopping the flow of blood from the latter, leeches are preferred, and from the same danger in this case, they should be applied in such places, as most readily admit, the use of the compress and bandage, as the hand, foot, mastoid process of the temporal bone, &c. The closing reflections upon this subject, we give in the words of the authors:—

"The quantity of blood to be taken must, of course, be determined by the urgency of the symptoms. It should be always sufficient to make an impression upon the sytem—of which we judge best in the child by observing the color of its lips and cheeks: the former especially quickly indicate the approach of faintness by the paleness which they assume, and are a much better guide than the state of the pulse, which is very variable. As a general estimate of the absolute quantity to be removed, we may say, that during the first year, from an ounce to three ounces, or two or three leeches, will be a sufficient bleeding; and after the first year, we may usually take an additional ounce for each year of the child's age—seldom having occasion within the period of childhood to exceed eight ounces. The buffing of the blood is not a safe guide in the child, as we have diseases absolutely requiring bleeding, (e. g. croup, bronchitis, &c.) which seldom produce in the blood the appearance in question."—p. 78.

Blisters.—The following judicious remarks, on this remedial agent, must commend themselves to the reflecting and observant physician:—

"Blisters are much employed in the treatment of inflammatory affections in children, and, when judiciously used, are signally efficacious; but, as they induce much local and constitutional excitement, very injurious consequences follow their improper application. Hence, blisters should never be used in the early stages of severe inflammations, as a substitute for bleeding; nor should they even follow soon after the employment of this remedy, unless a decided impression is made on the local disease and fever—otherwise, both will be aggravated by the effects of a blister; and we have had occasion to order repetitions of bleeding, which would not have been requisite, had not acute symptoms been renewed in this way. Some attempt to obviate these effects by applying them at some distant part (as one of the extremities,) in the first instance; and such practice is common on the Continent, in the abdominal and cerebral inflammations of infants; but the plan is not very efficacious, while it is accompanied by all the risks attendant on excess in the local irritation. We therefore prefer waiting until the proper time, and then applying the blister near the affected organ."—p. 79.

But there are other serious objections to these counter irritants in childhood—sloughing, gangrene, and death follow their improper use. The precautions advised against these lamentable occurrences, are first, to make the blistering plaster only half the ordinary strength, a precaution that will in many cases defeat an impression of any kind, beneficial, or adverse. The second is better, "the protection of the surface by the interposition of some thin substance, as muslin, or bobinett. They should be oiled, as the oil dissolves the vesicating principle, and thus enables it to reach the skin, while the surface is protected against the flies remaining on it. "If the blistered surface become irritable, looking very red, and showing a disposition to inflame, the dressing should be changed for the use of fine powder of some kind, such as flour, starch or prepared chalk." This is treating it as a

"burn," and undoubtedly, it may be so considered, but we should prefer in such cases, a liniment composed of equal parts of olive oil, lime water and spts. Turpentime, because it is equally soothing and more efficacious. Whenever this state of things shows itself, the practitioner may look out for danger. In case the constitutional symptoms run high, and the ulcer is irritable, emollient applications are recommended. The recipe below is considered very valuable in this complication of difficulties.*

Stimulant applications are advised, "when the surface is pale, with ash-colored spots, surrounded by a dull or livid redness." If gangrene be established, the fermenting poultice should be resorted to, but in some cases, more active and energetic treatment will be required—such as brushing the ulcers with nitrate of silver, followed by a warm, soothing poultice. The constitutional treatment must not be lost sight of—nutritious diet should be given, such as arrow root, broth, jelly, &c. and quinine or ammonia mixture.

We have dwelt at more length, upon this section, because we think the matter contained in it, worthy of the attention of the young practitioner. These disagreeable attendants upon the best regulated efforts at giving relief, are by no means uncommon, and when they occur, the remedial measures, should be prompt, decisive and appropriate. Let the fact of the danger, stand as a beacon, warning against the rash and ill-advised employment of a very valuable agent of the Materia Medica. It is culpable to risk the improper

Unguentum Sedativum.

* ℞. Aquæ Calcis,
Olei Amygdal. a. a. ℥ ss.
Bene Admisce et adde,
Adipis Preparatæ, ℥ j.,
M. ft. Unguentum.

use of a mean of relief, which properly applied is capable of answering the great end of beneficial influence.

The next sections in order are devoted to a consideration of Emetics, Expectorants, Diaphoretics, Refrigerants, Baths, and Purgatives. Each of the subjects are well treated, but we cannot devote much space to them. From the section on Refrigerants we extract some useful observations:—

"The best of refrigerants, however, is cold water,—and it should be largely given to all children laboring under febrile disease, and desiring cold drinks, as they usually do; even infants at the breast are much benefited by the occasional administration of a little cold water under such circumstances. If the stomach be very irritable the water may be iced; and in no case should children desiring cold drinks be denied them, as is too commonly done. Occasionally warm drinks are preferred: this happens usually in some form of bowel complaint, and has been assigned as a symptom of inflammation of the ileum in particular.

"The influence produced upon the skin sympathetically from the use of cold drinks predisposes it to perspire, by lessening the action on the surface, and so diminishes the heat. This is an important part of the good thus done: but may be directly attempted by the use of tepid or cold sponging, or the employment of baths.

"Sponging the surface as we do in the febrile diseases of adults, is not practised at all so frequently with children as it deserves to be. Caution is requisite in the use of these means, particularly in the eruptive fevers, where the employment of cold sponging, or even dashing, is occasionally serviceable; but much judgment is required before having recourse to this measure, which should never be employed unless the febrile symptoms run very high and undoubted power of reaction be present. The local application of cold is one of our most frequent and powerful means of subduing increased action. Its mode of employment is important: to be effectual, we must use it steadily—but should try to avoid giving the child cold, as severe bronchitis not unfrequently follows the application of wet cloths to the head in young children. Ice inclosed in a bladder, or a refrigerating mixture put therein, is the safest and best mode in severe cases, as acute meningitis, when the cold should be kept incessantly applied.

"Pouring a stream of cold water on the head (held over a

basin, so that the water shall flow backwards over the head, not down the face,) has been in particular recommended in severe cases. The employment at the same time of the partial hot bath, as a derivative, the feet or hands being immersed therein, adds much to the effect of this remedy. The local application of cold is almost exclusively confined to the head—and hot stupes alone are applied to the abdomen; but the order may be reversed with advantage under certain circumstances. When the cerebral symptoms are those of compression, and have arisen in a child much debilitated, run down by very active depletion or severe vomiting and purging, the active application of hot stupes to the head will be found of signal service; whereas cold which is so universally used, even under such circumstances, only adds to the severity of the symptoms. On the contrary, in cases of acute abdominal inflammations, with great heat of skin over this region, cold lotions have been recommended, and are said to have produced the best results; but popular prejudice is strong against such practice as yet,—and though we have suggested their employment, we have not seen them used."—p. 86.

We pass from these judicious remarks without a word of comment, to the consideration of the section on *purgatives*, though we shall not inflict on our readers an analysis of its various formularies and recipes. The merits of senna, rhubarb, aloes, jalap, et cet. are too well known among western physicians, to require much space in a Review. Of the highly valuable qualities of aloes as a purgative for children, we can bear testimony, and think it inferior to no article of the class. But there is one observation made by these authors, in relation to Aloetics, that we confess is new to us. It may be old, but this is the first time we have had a reading acquaintance with it in a modern book, and it would perhaps be well enough to read it with the cautionary hint of an old German thinker, who declared, "that which is new is not true, and that which is true is not new." But to the discovery, and it is really a strange one to find in such a book: "It (aloes) combines a tonic as well as purgative power in virtue of its bitterness; *it has a particular relation to the liver either as a substitute for bile* when deficient, or as passing

through the liver, and so causing its flow, &c." Let no medical man be restrained from the exhibition of aloes, by fears of its tonic properties. All writers on Materia Medica, we believe without exception, name aloes as the exception to the otherwise almost universal law, of tonic properties and bitterness in vegetable matter being concomitant. But the idea of Pharmacy being equal to the task of extracting from a plant, a substitute for bile, passes all our credulity. If by any possibility such a monstrous claim could be accredited, a new direction would be given to medical enquiry—we should cease our attempts to discover correctives for deranged secretions, and examine the volume of nature, for substitutes for secretion. Perhaps the dew drop, by some new relation yet to be unveiled, may be found an admirable substitute for the secretion of the Meibomean glands, and an invaluable paste may yet be made, to answer for deficiency of saliva! And when aloes takes its place in the human system, as a substitute for bile, we shall at once, in a great measure cut ourselves loose from two great annoyances in the practice of medicine—a torpid liver can be no longer a source of disquietude, and the use of calomel, to excite that which need not be excited when we have a substitute for the secretion, will cease entirely. The idea of aloes passing through the liver, *wheel-barrowing* the secretion in its progress, if not as original as the other portions of the extract above, is at least as novel, and we commend them to our readers, for whatever they may think them worth. We have been much pleased with the effects of aloes, in the treatment of biliary affections, but freely confess that we were not before aware of the character of our obligations.

We turn from this to something really valuable: the treatment of *Asphyxia Neonatorum or still-born Children.* The remarks upon this, are both philosophic and correct, and

we cheerfully commend the following extract to more than one perusal:—

"Two practices are invariably adopted with still-born children, after the separation of the funis—viz. inflation of the lungs, and the warm bath. These, when used with judgment, are unquestionably means of great power in exciting respiratory action—but when injudiciously employed or persevered in, become, we have no doubt, frequent agents of destruction. It is now well ascertained that there is no more certain and speedy means of destroying animals, than a brisk inflation of air into the trachea; and therefore it is positively wrong to use any powerful mechanical means, for this purpose, in the new-born child. The gentle filling of the lungs with air does, however, certainly excite respiratory movements, and also facilitates pulmonary circulation, and it should therefore be cautiously practised. In doing it, no trachea pipe or bellows should, we think, be employed, but air simply blown into the mouth, the operator applying his own lips, with a bit of silk or muslin intervening (for the sake of cleanliness,) to those of the child. While doing this, the head is to be slightly extended, the nostrils must be held between the finger and thumb of one hand, and the fingers of the other should be placed upon the pit of the stomach, so as to prevent the air from passing into that organ. When the chest has been distended, it may be compressed gently with the hand, so as again to empty it, and the inflation may be repeated three or four times, or until the commencement of natural respiration is announced by a sneeze or deep sigh. In addition to the evil consequences due to the force that would be exerted by bellows or other apparatus for inflation,we may mention that insufflation of cold air, in the event of resuscitation, seldom fails to produce dangerous bronchitis.*

"With respect to the warm bath, those who have frequently witnessed its employment with still-born children will recollect that when it does good it is at the first moment of its application: immediately upon plunging the child into it, respiration will be set agoing and a cry uttered—but if this does not occur at once, keeping the child immersed in the water will seldom be successful. This is explained by the discoveries of Dr. Edwards, who found that the lower the natural or artificial temperature of an animal may be, the longer it can exist in a state of asphyxia; but that, at the same time, the momentary application of heat, as well as of

*See Dublin Practice of Midwifery, p. 239.

cold, acts as a stimulus, and produces more forcible motions. Consequently he says, "the immersion of a great part of the body in warm water, is frequently an efficacious means of re-animating a child just born without signs of life. As soon as motion is produced, or if it be slow in manifesting itself, it will be right to abandon a method the prolonged use of which would be fatal." The object, then, is to plunge the infant quickly into a bath hot enough to stimulate it (probably about 100°;) and if motion be produced, to withdraw it, and continue the excitement of the surface by friction with dry, warm flannel; and when respiration is well established, to lay it in a warm bed. The researches of Dr. Edward Jorg, published in his work already quoted, show that our care for the establishment of perfect respiration is not to cease when we get the child to breathe so well as to enable it to live for days, or even weeks. It may survive so long, and yet die from the effects of an imperfect filling of the lungs with air—many cases of cyanosis, infantile bronchitis, atrophy, and even convulsions owing their origin to a partial continuance of the lungs in their fœtal condition. Should the child, therefore, continue to breathe feebly, and show an inability to suck, after animation has been restored, we must endeavor to promote more perfect respiration by friction on the surface, and stimulate the intestines by an aperient of castor oil; or if there be much mucus obstructing the bronchi, it may be advisable to excite vomiting by administering half a drachm of ipecacuan wine."—p. 96.

It should be borne in mind that there are two varieties of this Asphyxia, and that the same treatment will not do for both. We have seen both varieties—one is attended with strong marks of fulness—such as hot skin, fulness of face, and strong pulsation of the cord. In the first part of the remarks of Dr. Maunsell on this subject, he mentions the proper remedy for this state of things, without however directing it to this peculiarity—it is, to open the end of the cord, and let it bleed a little. In the other form, in which all the marks of collapse are strongly exhibited, the above recommendations of the author, will be found highly serviceable, if any course can relieve.

Of the chapters, treating of Dentition affections of the mouth, stomach and bowels, we cannot speak very commen-

dably. They have not that philosophic caste which we should have looked for in a work emanating from such a source. Some of the subjects too are very cursorily disposed of, and in a manner somewhat inconsistent with the high claims of a book professing to fill an important *hiatus* in medical literature. We pass to the chapter upon *Tabes Mesenterica.*

This is classed with scrofulous diseases, and undoubtedly very correctly so, when we take into consideration the coincidence in the temperaments of those who suffer under both maladies, the analogy in general characteristics of symptoms, the peculiarities observed in each, and the result of the same remedial measures in both affections. For these reasons Sauvages long since, entitled it *scrofula mesenterica.* To the above characteristics of commonality of pathology, we may add, that *post orbit* examinations conclusively show that this form of *Tabes* is a scrofulous disease.

The value of preventive measures is not more triumphantly shown in any class of diseases than in this. Cuvier has taught us the great truth, that an animal is possessed of vigorous health in proportion to the amount of oxygen it consumes, and from this fact, is deducible the great value of ventillated apartments, or in other words, of pure and fresh air. And one of the best measures for preventing the development of the disease, in a person predisposed to it, is well regulated exercise in the open air. With this, should be combined the most marked attention to diet, cleanliness, frequent ablution of the skin, &c. But we shall not push this matter farther in this Review, because we are at present engaged upon a treatise on this subject, which shall be presented to our readers as soon as circumstances will permit. We return to the book before us.

The following remarks upon the state of the mesenteric glands are especially deserving of attention:—

"The emaciation attendant upon this disease is a striking charateristic, and that from which its denomination, *tabes*, is derived. Tubercles in the mesentery, however, are not necessarily attended by emaciation from the first: for they have been found in cases where the body was not wasted, and therefore their presence not suspected. Even in cases where emaciation has been established, and the glands in the mesentery can be felt enlarged, the wasting is not to be accounted for on the old supposition of actual obstruction to the passage of the chyle, and so wasting of the body from failure of nutrition; for the glands, however enlarged, have not been found impervious to anatomical injections after death; nor (as Cruikshank remarks,) has "stagnation of the chyle in the first set of lacteals" been met with. The length of time during which mesenteric disease endures, makes also against this supposition; and when the patient dies, he perishes from the effects of some acute attack, or of the hectic fever which attends upon this, as well as other forms of tubercular disease."—p. 170.

We cannot yield to such arguments the belief that the nutrition of the system is not impaired by the state of these glands. And the importance of the principle involved here, should make us hesitate before giving up to such mere assertions, for upon the effect of the deranged glands upon chyliferous matter, is founded the value of correct notions of dietetics in the treatment of the disease. What value then is there in the fact that the anatomist is able to push his injections with a force pump through them? Will it prove that the chyle is able to effect its passage through by natural efforts? Certainly none will so contend. But if it be the truth, that there is no obstruction to the mere passage, does that settle the point, that these glands discharge their duties upon the chyle, in elaborating it for the system, in its transit through them? This is the great matter to be settled, and it must be done by something more rational and philosophic than simple assertion. We ask the young practitioner to be guarded in reading observations of this kind, which bear upon valuable principles of treatment, and beg them not to

be in haste to surrender truth to the mere breath of high authority. The experience and observation of the profession have determined, that the functions of the mesenteric glands are so much deranged as to require the mildest and most nutritious articles of diet, those which demand the least labor on the part of the digestive organs, for converting the food into chyle, hence the necessity of an accurate acquaintance with the state of the glands involved.

The treatment advised by our authors, contains nothing novel—warm baths or *stupes*, to use one of their elegant and euphonious terms, when there is abdominal pain or uneasiness, mild purgatives merely to keep the bowels open, Iodine, both in the form of drops *per oris*, and Unguents of the Hydriodate of Potassæ, are the leading means recommended. In reference to diet, their views are not very precise. It should of course be that which will give the greatest degree of nourishment, with the least exaction of labor, from the sub-systems concerned in the function of elaborating chyle. We know of no article among the nutrientia so well calculated to answer the indications in such cases as the best brown sugar, which we have extensively used, upon the recommendation of Prof. Dunglison. Under its use in combination with a course of Iodine, &c. we have seen the most forbidding symptoms yield, and are well persuaded, it merits a very large share of the attention of medical men in treating scrofulous affections.

The sections which treat of Worms and Remittent Fever, are not of sufficient merit to justify analysis, and we pass them in order to get at more important matter. We select *Bronchitis*, because from some cause inexplicable to us, there has been a considerable increase in the number of its victims within the last few years. The following description of the disease, is tolerably accurate:—

"Children are very subject to this affection at every age, and in every degree of its intensity. The symptoms are—general fever, and restlessness; with quick pulse, hot skin, and costiveness, or frequently diarrhœa, with deranged secretions; cough, more or less violent,—accompanied by a mucous rale, which may be heard by applying the ear immediately to the chest, or may often be *felt* by placing our hands flat upon opposite walls of the thorax; the respiration is frequent (amounting sometimes to 100 in a minute;) upon percussion, we shall find the chest sonorous throughout at the commencement, but towards the close it may be dull in some parts; the face may be livid and swollen, or pale and œdematous. In the latter stages, each fit of coughing is accompanied by a paroxysm of suffocation, ending often in vomiting; and towards the termination, coma or convulsions may supervene. When the disease terminates unfavorabiy, it usually runs its course within eight or ten days: when the child is to recover, convalescence generally commences in five or six days; the respiration becomes less frequent, the fever abates, and a free secretion being established from the mucous membrane, the cough becomes looser and less suffocative."—p. 192.

For this state of things, our authors advise an antiphlogistic course, such as bleeding, emetics at the commencement, nauseants carried far enough to keep the action subdued, purgatives merely to obviate costiveness, or to remove vitiated secretions, the warm bath, not general however, but a simple immersion of the lower extremities, up to the hips, so as to produce a derivation of the active movement of the fluids. This is for the inflammatory stage, but if we meet with debility and general prostration, instead of the active condition we have mentioned above, mild emetics to throw off the accumulated mucous, a combination of calomel and ipecacuana in small doses, and blisters on the chest, or between the shoulders, are considered the best measures to be pursued. It is said, if the blistered surface runs into gangrene, that the bronchial symptoms subside immediately, a subsidence "commonly purchased by the death of the patient from the new affection." The apartments should be well ventilated, for the efficacy of fresh draughts of air, in

relieving the symptoms of Bronchial Catarrh, is of the most gratifying character.

The next section treats of *Croup*, and being regarded an inflammatory affection of a very vascular and vital part, we are prepared for a strict antiphlogistic treatment. Such is the course advised, as bleeding, emetics, nauseants, et cet. being the means to be depended on during the inflammatory stage. When symptoms of debility show themselves, stimulants are recommended, the best of which, are ammonia, wine and burnt brandy. And though recoveries sometimes take place from the most hopeless condition, yet in the great majority of these prostrated cases, even "burnt brandy" true to its proverbial character, "cannot save them." We do not notice the prescription of a plaster of Scotch snuff to the throat recommended for controlling the highly inflammatory affection, and yet medical gentlemen in this country who have full faith in newspaper therapeutics, often resort to it. Having no experience in its use, we are not perhaps prepared to appreciate its value.

The remarks upon Bronchotomy in cases of croup, are so lucid in the condemnation of that foul blot upon surgery, that we quote them entire. Dr. Maunsell, the writer of this section thus disposes of the claims of this operation:—

"It has been proposed to perform the operation of bronchotomy in croup, with the objects—first, of admitting air to the lungs without the intervention of the larynx; and, secondly, of removing, mechanically, the false membrane from that passage. We have already stated that the inflammation of croup is not confined to the larynx, but extends over the whole bronchial mucous membrane; and Dr. Cheyne has shown that, in fatal cases, a space of more than two-eighths of an inch usually exists in the larynx for the transmission of air. The patient, therefore, except in cases of sudden spasm, dies, not because air cannot have access to his lungs, but because these organs are unfitted, by their inflamed condition, from performing their own function. Consequently bron-

chotomy is unnecessary for the effecting of the first object, and can do no good. As to removing the false membrane, if it could be accomplished, which those who are familiar with the morbid appearances in croup will doubt, the same ultimate objection applies, viz.—that we still have the diseased condition of the lungs remaining, and to the removal of that we contribute nothing by opening the windpipe."—p. 201.

Several other affections of the throat, pleura, &c. are treated at length, but we find nothing more worthy of much commendation, or condemnation, and we pass on to a consideration of some of the Exanthematous maladies.

We have been much disappointed with the labors of these authors on *Scarlatina.* The description of the various forms of the disease, is not such as we should have looked for in a work of this kind—the pathology is indifferent, and the treatment a mixture of no great things. We shall pay our respects to the *Treatment in Simple Scarlatina.* The apartments are to be kept well ventilated, cooling drinks given freely, and abstinence from animal food, and every thing heating, strictly enjoined. Gentle emetics are serviceable in checking the fever, and relaxing the skin and also by clearing the throat of viscid mucous—to be followed by a purgative. The views of Dr. Armstrong on the free use of aperients are condemned, and his reliance upon a bold administration of calomel does not meet with favor. Now we question whether any man has ever excelled Armstrong either in his views of the indications to be fulfilled in this disease, or the measures to be pursued in carrying them out. And his observations have one great advantage over these we are considering—he gives reasons and facts for them. But we are digressing—sponging the surface with tepid water is highly recommended, and will be found very serviceable. Bleeding is to be resorted to with a trembling hand, and a due regard to the awful dangers attending it—"enough should be taken to control the inflammatory tendency—*but not one drop more,*" is the maxim

laid down, and it is much easier expressed than acted upon. We have at least no gauging apparatus to assist us in reaching the great precision of "a drop."

Gargles are advised for the sole purpose of removing the viscid mucous from the throat, and that one generally called "pepper tea" will be found most useful for this purpose. While this article is only depended upon for the purpose named, it would probably astonish European practitioners to learn how much we are in advance of them on this point. Some medical men in our country use this gargle as their sole dependence for eradicating the disease in all its various forms, and boast unparalleled success, never having lost one case, not even of Malignant Scarlatina. It is somewhat lamentable however that the infusion of capsicum so simple and so uniformly successful in its exhibition, should confine its benefits to a few, for the many who prescribe it regularly give a very different account of it.

We regret that the writer of this part of the work, has neglected to make conspicuous the great danger of secondary inflammations, during convalescence from scarlet fever. The utmost attention is necessary on the part of the physician and those who control the patient, to guard against evil in this period of the disease. A case in point happened under my own observation very recently. A child of Mr. J. C. B. had quite a severe attack of "*inflammatory scarlet fever.*" He had recovered, and great attention had been paid to his diet, clothing, and the secretions of the system. Two weeks after his recovery, he slipped from the charge of his mother, and played one cold afternoon, without the protection of shoes or hose. He was again attacked with violent fever—excessive glandular swellings took place about the neck, *the eruption re-appeared* and at one time the symptoms were alarming. This case strongly points to the necessity of great vigilance

for a considerable period after recovery from an attack of this fever.

Treatment in Scarlatina Maligna.—The views of Dr. Armstrong in his Essay on scarlet fever, relative to venesection in this form, are combated by our authors, and the dangers of the practice are presented with much force. It is very true, as stated by the authors under review, that in this part of his essay Dr. Armstrong was not free from misgivings as to his practice, for in his Lectures they are greatly modified. The very first sound that broke from his lips, in speaking upon the subject was, "be extremely careful about the abstraction of blood." And instead of the opening of the veins, and repetitions of it, mentioned in the essay, we are advised in his Lectures to apply leeches to the throat, provided the patient is seen early—if the pulse rise under their application, a moderate bleeding is recommended, but if they sink, the orifices are to be staunched immediately.

In the work before us, emetics are esteemed worthy of a conspicuous place, on account of the shock they produce on the nervous system, but we think they are valuable because they determine action to the skin, and thus relieve the dangerous internal engorgement of the viscera. Mild purgatives, immersion in a hot saline bath, rubbing of the skin freely with warm flannel, especially when unequal distribution of the heat exists, are the general means advised. For ulcerations of the throat, stimulant gargles, washes of nitrate of silver, or of copper are most relied upon. The application of blisters are condemned on account of the great tendency to the formation of gangrene. The following observation is entitled to great respect: "In children living in crowded apartments, we have witnessed the most marked change in the condition of the throat to be immediately produced by free exposure to air; and in every possible case, we

would recommend the practice to be adopted." We most cordially join in this recommendation, and an extensive employmont of fresh air, in the treatment of febrile affections, especially this one, will amply confirm the remark of Dr. Maunsell—"that of the measures recommended for the treatment of *Scarlatina*, the free admission of fresh air, is probably the most important and efficicent of all." The word "admission" may perhaps restrict the employment of the remedy too much, for if the point cannot be gained by ventilating the house or apartment, the child should be carried out where it can enjoy the benefit of the uncontrolled breeze.

In this form of *Scarlatina* there is reason for still greater watchfulness of the period of convalescence, than in the other varieties. The sequelæ are more dangerous and the tendency to visceral inflammation much greater.

We find at the close of the article a reference made to the preventive measure brought forward by the notorious Hahnemann, the author of the Homœopathic doctrine. He promulged, many years since the idea, that the Belladonna is capable of preventing the inception of the infection of scarlet fever, and it has attracted some attention in various parts of Europe. Berndt, Dusterberg, Behr and other German physicians attest the truth of the doctrine—Koreff, Hufeland and Kunzman of Berlin, join their testimony to the same fact. It must be given Homœopathically—"3 grs. of the ext. of belladonna are to be dissolved in one ounce of distilled water, and two or three drops given twice a day to a child under twelve months old, and an additional drop for every year above that age." The Homœopathists contend that even when it fails in preventing the attack, it makes the disease much milder, and one of these statements is just about as near the truth probably as the other—we have an abundance of doubt about both of them.

With this we close our notice of the work, without paying any attention to the several sections on Scrofula, Syphilis, Functional Diseases, &c. There is not much matter in either, but what may be found in the common medical books of the country, and we do not feel inclined to lengthen this Review with any thing of the kind. The work will repay a close perusal, though we do not think it equal as a *desideratum* to the work either of Eberle or Dewees. T. S. B.

ART. VI.—*Phrenology Vindicated, and Antiphrenology Unmasked.* By Charles Caldwell, M. D. New York, 1838—p. p. 156.

This volume contains three spirited papers—a reply to Professor Sewall's Lectures on Phrenology, a notice of Dr. Reese's "Humbugs of New York," and a Valedictory Lecture on the Phrenology of Falsehood and its kindred vices. The first article constitutes the larger portion of the volume, and is written with uncommon point and energy. Dr. Sewall professes to be dissatisfied with the stand made against Phrenology by the opposers of that science, and to have taken new and much stronger ground in his Lectures. "The metaphysical arguments on the subject," he says, "while they have been urged with great power, have too often been evaded, and the public mind has not been enlightened, as to the real merits of Phrenology, by the usual methods of investigation." "Even the lash of ridicule," he continues, "under which it has generally been left to wither, has done but little in arresting its progress, or exposing its errors." The *anatomy of the parts concerned*, he maintains, is the proper and only standard by which to ascertain its truth.

Upon this ground, Professor Sewall has erected a more plausible and effective argument against Phrenology than has yet been opposed to it; and his Lectures, consequently, have been much read, and have made a favorable impression upon the public mind. Dr. Caldwell has taken up this argument and replied to it in a manner which will probably satisfy his readers, that the antiphrenologist has been plausible merely, and that his opposition to the science will prove as fruitless as that of which he complains. The following is his reply to the anatomical objections:—

"I must now return, and offer a few remarks on Dr. Sewall's proposition laid down in the beginning of "Lecture II.," in which he pledges himself to "show, how far Phrenology is reconcilable with the anatomical structure and organization of the brain, the cranium, and other parts concerned;" and on his declaration which immediately follows, that the anatomy of the parts concerned, is the *proper and only standard* by which to ascertain the truth of the science. The meaning of this extraordinary allegation is, that a knowledge of the anatomy of any part of the human body is our only clue to guide us to a knowledge of its physiology or function; than which a more groundless assertion was never uttered. So far is it from having even the semblance of correctness in it, that in no single instance has the function of a part ever been discovered by an examination of its anatomical structure. No; the functions of organs are discovered by observation alone; observation, I mean, made, not on the organic structure of the parts when dead; but on their action and its results *while living*. And even when the discovery is made, no peculiar aptitude is perceptible between the anatomy of the organs, and their modes of action. That aptitude no researches in minute anatomy have yet demonstrated. And that the demonstration will ever be made, is far from being certain. But it is very certain that enlightened anatomists and physiologists disclaim all pretension to such accuracy of knowledge at present. If Dr. Sewall sincerely believes otherwise, his ignorance on the subject is eminently disgraceful to him. And if he is acquainted with the plain truth, so abundantly familiar to the medical world, that the function of none of the organs of the body has ever yet been discovered by its anatomical structure; and that as respects even the organs whose functions are known, no peculiar fitness is discov-

erable between those functions and the organization which produces them—if he is acquainted with this truth, and asserts the contrary, for the purposes of deception, the task of apportioning to him the measure of reprobation he deserves, is left for the present to the conception of others. I am unwilling to express it in words.

"I ask Dr. Sewall to inform me frankly, whether he honestly believes, that he can tell, from its anatomical structure, *why* the simplest piece of vital organization produces the kind of action and issue, which observation assures us it does produce? Can he thus tell *why* an acorn produces an oak, and not a hickory? or why a walnut produces a walnut-tree, and not a chestnut, or an elm? Can he tell from its structure and organization, why the egg of a turkey produces a turkey, and not a buffalo? or why the egg of a goose does not produce a shark or a grizzly bear? or, stronger still, why it may not produce even a *Professor of Anatomy?* Can he tell why the liver secretes bile rather than pancreatic liquor? or the kidneys urine, rather than saliva? Can he tell why a muscle contracts? or why it is not instrumental in sensation, in place of a nerve? Can he tell from the structure even of the heart itself what must be of necessity its functions and uses? No, he cannot. Long before the discovery of the circulation of the blood, the structure and mechanism of that organ were known, as accurately as they are at present. But functions and uses very far from the true ones, were attributed to it by the anatomists and physiologists of the day.

"It will be understood that I here allude not to the mechanical, but to the *organic* structure of the parts concerned. Since the discovery of the circulation of the blood, that a fitness of the valvular structure of the heart and veins for the performance of that process is perceptible, cannot be denied. It is even probable that the knowledge of the venous valves, which he had derived from his preceptor Fabricus ab Aquapendente, led Harvey to the discovery of the circulation. Still it was observation alone—I mean the actual *perception* of the functional action of the part that completed the work, and immortalized the discoverer. But neither Dr. Sewall, nor any other anatomist or physiologist can discover the shadow of fitness between the vital contraction and dilatation of the heart, and its minute anatomy. From any knowledge he possesses of such anatomy, he cannot render the slightest reason, why the heart should not perform the function of the liver or even of the brain, as well as that which it does perform. So consummately empty and arrogant is his pretension of being able to "demonstrate" from its

"structure," the unfitness of the latter organ to perform the offices assigned to it by Phrenology!

"That there exists an essential and immutable relation between the minute organization of every distinct part of the body, whether it be muscle or gland, membrane or blood-vessel, and its mode of action, is necessarily true; but it is equally so, that that relation has not yet been detected. No; the functions of all our organs, as far as they are known, have been discovered, I say, not by anatomicl researches into the minutiæ of the structure of dead bodies, but by observations on living bodies. And, in many if not most cases, that observation may be made as effectually by men who know nothing of organs, except their existence and location, as by those who are intimately acquainted with their structure. Every one knows that the eye sees, the ear hears, the tongue tastes, and the nose smells, and that the fingers are the seat and instruments of touch. It is almost as generally known, that the lungs are concerned in respiration, the stomach in the digestion of food, and the liver in the secretion of bile. But the infant in his cradle knows as well *why* these things are so, as the ablest anatomist and physiologist in existence.

"If this, moreover, is true, as respects the simpler organs of the body, much more so is it, in relation to the more complex ones. Wherefore is it then that Dr. Sewall alleges the notorious fallacy and monstrous absurdity, of being able to "show whether Phrenology be reconcilable to the anatomical structure and organization of the brain?" Just as easily can he tell, by an inspection of the nose, whether its possessor be a christian or a pagan; or by an examination of the great toe, under what form of the horoscope its owner was born.

"Will Professor Sewall so far oblige his less enlightened cotemporaries, as to inform them, what sort of cerebral structure is suitable, and what sort is not suitable for the production of the organ of Benevolence—of Veneration—of Firmness—of Hope—of Ideality—or even of *Secretiveness*, whose excess leads to deception and jugglery; with the operations of the last of which his acquaintance is intimate. The Professor is doubtless prepared to give this information; else how can he show, whether Phrenology is "reconcilable" or irreconcilable "with the anatomical structure and organization of the brain." In truth, he knows but very little about the brain, notwithstanding the following pedantic and dogmatical paragraph:

"The fact of the existence of the horizontal membrane called the tentorium, separating the superior from the inferior part of the brain, as well as the arrangement of the lateral

ventricles, the corpus callosum, the fornix, and other parts, clearly show the absurdity of the idea of organs as described by phrenologists. The notion, then, of the division of the brain into phrenological organs is entirely hypothetical; is not sustained by dissection, and is utterly inconsistent with its whole formation."

"This is a mere "*clap-trap*," as empty and fallacious, as it is conceited and artful. It is designed, I mean, by Dr. Sewall, to secure to himself a character and consequence with the public, which he does not deserve, by an affectation of knowledge which he does not possess. It is instinct, moreover, from beginning to end, with a spirit of insolence and misrepresentation. It is not true, as he asserts, that the tentorium *separates* the superior from the inferior portion of the brain, in other words, the cerebrum from the cerebellum, in such a way as to interfere in the slightest degree with the doctrines of Phrenology. Nor, as far as I am informed on the subject, has any antiphrenologist, other than Dr. Sewall, ever made the assertion. No matter, however, whether others have made it or not. Nature does not sanction it in her structure and general arrangement of the parts. It has not, therefore, I repeat, the slightest foundation in truth. The opening in the tentorium for the passage of cerebral matter is amply sufficient for the purposes of Phrenology. Nor, whether they be considered separately, or in their united influence, do the "lateral ventricles, the corpus callosum, the fornix," or any other portion of the brain, offer the slightest objection to the truths of the science. If Dr. Sewall is ignorant of this, it is because he is equally ignorant of the principles of Phrenology and the structure of the brain. No wonder, therefore, that he cannot perceive their relation to each other. I need hardly add, that the insolence of the paragraph quoted consists in its author's rude imputation of "absurdity" to a body of men who are immeasurably above him in every attribute that constitutes an element of human greatness and merit. If I treat the Professor without much observance, he may look for the cause, with a certainty of finding it, in his own repeated and reprehensible violations of truth, and his coarse discourtesies toward phrenologists. I shall only further observe in this place, that his entire exposition of the human brain is as superficial and flimsy a production of the kind, as I have ever examined."—p. 63.

A small head, Dr. Sewall maintains, is by no means incompatible with extraordinary talent, and in proof of the opinion he quotes Professor Warren as saying, that he "had the head

of a celebrated chief, who had a most extraordinarily flattened forehead, and he was known to have remarkable talent—in fact, no person was thought of any consequence in that country (the country of the Carib) unless he possessed a flat head." On this subject Dr. Caldwell has the following observations:—

"The chief I say was of the Caribs, a nation now nearly, if not quite, extinct, of whose *general* history we know but little, and of their *individual* history nothing at all. We learn, indeed, chiefly by tradition, that, as a people, they were a personation of ferocity, savagism, and revolting brutality. Precisely as a phrenologist would infer from the size and shape of their heads, their intellect was extremely limited, being, in common with that of the inferior animals, the product almost alone of their perceptive organs; morality was still more dismally wanting in them; while their courage was fearless, their cruelty and thirst for blood insatiable, and their Secretiveness, Covetiveness, and other animal propensities on the same scale. So signally true is all this, and so strikingly and forcibly is it indicated by their developments, that teachers of Phrenology are in the uniform habit of exhibiting the Carib head in verificatien of their doctrines. So warlike and indomitable were the Caribs, that they could not be subdued. They were therefore *extinguished*. Of cougars, panthers, and tigers, the same is true—not however on account of their *high intellect;* but of their fierce and intractable *animality*. And the Caribs were the *tigers* of the Indian race. They had faculties for battle, stratagem, and rapacity; but not for knowledge.

"Thus far of the Carib *tribe*. And our intelligence even here is defective and dim. Of Carib *individuals*, whether *chiefs* or commoners, our information is necessarily far more restricted. Here even tradition fails to instruct us. As respects this subject, the entire tablet of our knowledge is blank; and every one *may* and *does* write on it as rumor dictates or fancy prompts.

"I am compelled to believe then, that Professor Warren's information respecting the "talent" of the flat-headed chief is extremely scanty in its amount, and doubtful in its character. How can it be otherwise? The chief lived, warred, and died, in the battle-field or his cave, many centuries ago—perhaps long before a Caucasian foot had placed its print on the shore of the western world; and when certainly no pen was em-

ployed, nor probably other means used, to delineate his character for intellect, or to record his actions.

"Whence then I ask again, has professor Warren derived his knowledge of the "*remarkable* talent" of the Carib chief? And I reply myself, without hesitation, that it is not from any authentic source. It is from *tradition* at best; and that of a very "dim-green light." Nor is this all.

"In giving character to a chief, in savage life, talents for knowledge avail but little. Bodily activity, strength, and hardihood, daring courage and brute ferocity do infinitely more. These indeed are almost exclusively the attributes of the savage leader. Hence a *brave* and a chief are nearly the same. A sachem in the council-house, and a chief in the field are different beings. Black-Hawk was a *chief*. And had he never visited the United States, he would have been supposed and reported to be a man of talent. In truth he *was* so reported. But a personal knowledge of him dissipated the illusion. He was a brutal daring savage—and nothing more. The grade of his intellect was low, and its compass narrow. His followers who accompanied him on his visit, surpassed him not a little in intellect; yet he was their chief, and they obeyed him. His head was not indeed *flat*—was not a Carib-head. But it approached that figure. His forehead was narrow, low, and retreating. And the same is true of many of the chiefs, whose likenesses are contained in the "History of the Indian Tribes of North America," now in the course of publication in Philadelphia. To close this discussion. The Carib chief, of whose skull Professor Warren speaks, might have been a man remarkable for talent, in a nation of "flat-heads;" but he would not have been so in a nation of "round-heads;" had that nation been composed of Caucasians. Nor, until the laws of nature change, in relation to the powers of the human mind, is it possible for an individual with a low, narrow, and retreating forehead, to be intellectually great. No well established instance of the kind moreover, has ever yet occurred. And I regret sincerely, that a man of Professor Warren's standing should have given the sanction of his name to so palpable an error.

"I respectfully ask the professor, whether he has ever known a man with a head "*almost as flat as a pancake*," (his own expression on the subject) possessed of "remarkable talent?" I mean *intellectual* talent. He will not reply *affirmatively*. Has he ever seen a man with such a head, whose intellect was not the counterpart of his forehead—*low*, *flat*, and *meagre*? Neither will he answer this question in the affirmative. I, on the contrary, confidently answer it for him

in the *negative*. Such an incongruous phenomenon has never met his eye."—p. 71.

Dr. Sewall appeals to Professor Warren for another fact—that an individual distinguished for the variety and extent of his native talent, was ascertained after death to have an uncommonly small brain—upon which Dr. Caldwell thus satisfactorily remarks:—

"Whatever may be the size of their heads, all men, not accidentally mutilated, or defective in the original *conformation* of their brains, have the same number of cerebral organs. Provided therefore his brain be well proportioned, and his temperament good, a man with a small head may apply himself to as great a "variety" of pursuits, as a man with a large head. And he may prosecute them with as much *activity*, but not with as much *power*. As relates to mental operations, the difference in the import of these two terms is not sufficiently regarded. That difference is radical as well as great. There may be great mental *activity*, with but little *power;* and great mental *power*, with but little *activity*. The activity of the racer, the greyhound, and the swallow, surpasses the activity of the dray-horse, the Newfoundland dog, and the condor; but their power is greatly inferior. In like manner, the activity of the mental faculties of woman is greater than that of the faculties of man; but their power is less. Yet the female may manifest as great a "variety" of talent as the male. And she does so.

"By the existence of a great variety or flexibility of native talent then, in an individual with a small brain, Phrenology loses nothing. Nor, of course, does antiphrenology gain any thing. And, as to the phrase "extent of native talent," I am ignorant of its precise signification. I can attach to it no definite meaning. And this is one reason, why I suspect Dr. Sewall of inaccuracy. I doubt greatly whether Professor Warren has ever used the expression. He is a scholar, familiar with the true import of words, and therefore writes correctly; while, as might be easily shown, Dr. Sewall's style is incorrect, many of his forms of expression being indefinite, and difficult to be understood. If however by "extent of talent" he meant great compass or depth, elevation or power of intellect, the expression involves a mistake. No man of "an *uncommonly small brain*," or even possessing a brain of but *common* size, has ever yet been an intellectual giant—a Cæsar, a Napoleon, a Bacon, or a Franklin. And as soon shall a dwarf in frame equal a Hercules in achievement, as

such an *unnatural* occurrence take place. If Professor Warren has really made the statement, as reported by Dr. Sewall, I respectfully ask him, whether the individual with "*an uncommonly small brain*," possessed the gigantic intellect, which once gave eminence to a Dexter dead, and now gives eminence to a Webster living! That his reply will be negative, I feel as confident, as if it were this moment sounding in my ear."—p. 75.

The grand objection of Professor Sewall to Phrenology is, the variable thickness of the skull, which, he thinks, renders it impossible to ascertain the volume of the brain by external examination. This is the main argument upon which he relies for the overthrow of the system, and he has certainly made an ingenious use of it. But, it would appear, that he has not fairly represented the facts in the case, having presented exceptions instead of the general rule. The following is Dr. Caldwell's reply to this objection:—

"This objection professes to rest on three points; the different thickness of the same skull in different parts; the difference in the thickness of the skulls of different individuals; and the different sizes of the frontal sinus. Though it is true that, to a certain extent, these differences do exist; it is equally true that, in the average of skulls, that extent is extremely limited. So entirely inconsiderable is it, as to have no appreciable influence in the result of the computation. By Gall, Spurzheim, and other phrenological writers, this truth has been amply demonstrated. Better still; it is demonstrated by skulls themselves; as every one may learn from a careful examination of them. By such examination it will appear, that the difference in these points, as relates to healthy adult Caucasian skulls, taken in mass, is not more than the twelfth of an inch—perhaps not so much. In a vast majority of skulls the frontal sinus is so small, as to place no obstacle in the path of the skilful Phrenologist, in his attempt to ascertain the size of the brain, by an examination of the head. It is not, I mean, beyond the discernment of such a Phrenologist to discriminate between cases, in which form and character may be given to the orbitar region by development of brain, or irregularity of bone. To those who have made themselves acquainted with the subject, these are but truisms. If they be otherwise to Dr. Sewall, he will find the cause, pro-

vided he search for it, in his own lack of information on the subject.

"Of the healthy skulls of adult Caucasians, the average thickness is about one-fifth of an inch. And, except in a few inconsiderable points, this is uniform throughout the skull. Here again, while I refer to the works of Gall, Tiedeman, John Bell and other distinguished anatomists for concurring testimony, as to the thickness of crania, I appeal to an examination of the skulls themselves, as the only infallible test of the truth of my statement. And to such test I confidently trust it. As a general rule, the difference in the thickness of the crania of different adult individuals does not I repeat vary more than from half a line to a line from this standard, or from one another, and rarely so much. The crania of children are thinner, while, as already mentioned, those of persons advanced in life, are usullay somewhat thicker and harder. Such are the facts which nature, when the part is in a healthy condition, steadily presents. Let them be contrasted with the counterfeit facts presented by Dr. Sewall. And if that gentleman can witness the contrast without shame and confusion, to say nothing of the neverdying worm of remorse, I envy him neither his conscience, nor his regard for the approbation and esteem of the votaries of honor, and the lovers of truth.

"His pamphlet contains seven engravings or lithographs of skulls, running from plate II. to plate VIII. inclusive. These, with a studied and cool duplicity, which might be well called detestable, he has palmed on the public, as a fair specimen of the average character of the human cranium, in respect to positive and relative thickness, and to the dimensions of the frontal sinus. Yet I venture to say that another group of seven such skulls, he has never seen. Nor can he collect such another perhaps in seven years' research. I am not myself entirely unacquainted with human crania. For twenty years past I have been in the habit of examining carefully all I could have access to, as well in anatomical museums as elsewhere. And nothing even *approaching* in character Dr. Sewall's *seven conspirators* have I been able to find. I bestow on them that ominous and odious name; because, by the agency of their *employer*, they are made to conspire against truth and science, conscience and every other praiseworthy feeling. Dr. Sewall has collected and used them, on the principle of suborning and bribing witnesses, or packing juries—that he may derive from them false testimony, and an unrighteous decision. And he has succeeded. His seven plates are so many conscienceless stratagems to delude. There is not among them the repre-

sentation of a single natural average skull. In point of thickness, plate VIII. comes nearest the truth. But even in that the thickness is not correct, and the frontal sinus is vastly too large. It is on account of its deceptiveness in the latter respect, that Dr. Sewall has had that cranium delineated. He wishes to impose on his readers the groundless belief that sinuses so spacious frequently occur; whereas it is doubtful whether they occur in one skull out of every ten millions; and in healthy skulls they probably never occur, because they are unnatural. I have seen them a few times in the skulls of idiots, which are always irregular in some way, on account of the irregular development of their brains. To speak more definitely on this point.

"The reader is requested to bear in mind, that, as heretofore stated, the average thickness of the human skull is about the fifth (*two*-tenths) of an inch, and to compare this with the following admeasurements:

"The thickness of the skull, represented in plate II. is about the *eighth* of an inch; that in plate III. a little more than *three tenths* of an inch; plate IV. about *five tenths;* plate V. *six tenths;* VI. *eight tenths;* VII. a *full inch* or more; VIII. thickness nearly natural, but frontal sinuses enormous.

"From this representation, brief as it is, the studied and reprehensible effort of Professor Sewall to deceive must be obvious to every one. His *professed* object is to give, in a series of plates, a *fair and natural* delineation of the average character of the human skull. And to effect this, he has had executed drawings of seven skulls, each of them in some way *deformed* and *unnatural;* and most of them bearing indubitable marks of disease. The cranium represented in plate VII. belonged to the cabinet of Spurzheim. I saw and examined it both in Paris and Boston. It is, if I remember correctly, the skull of a maniac. But whether correct in this or not, I am perfectly so in stating, that, in his lectures, Spurzheim exhibited it as a *diseased* skull. And as such, it must appear to every one acquainted with anatomy—Dr. Sewall not excepted. That gentleman informs us, that he procured from Professor Smith, of Baltimore, the skulls delineated in plates IV. V. and VI. And I doubt not that Professor Smith keeps them in his cabinet, as specimens *certainly* of *unnatural*, and probably of *diseased* crania. The bones themselves may not be diseased. But they are preternaturally thickened, in consequence of derangement in the viscus they enclosed. Such occurrences are frequent in cases of long continued madness and other chronic cerebral affections. The brain diminishes in size and the skull thickens; changes which had evidently

taken place in the brains and crania represented by Dr. Sewall, in plates IV. V. VI. and VII. The brains had been reduced in size by some morbid affection. In consequence of this, the internal table of the cranium had retreated from the external, to prevent the production of a vacuum, and a greater amount of diploe having been interposed, the whole had grown thicker. In the fashionable language of the day, a larger amount of blood flowing to the bones of the crania, they had become *hypertrophied*. I have several specimens of such changes in the skulls of maniacs. Even Dr. Sewall himself has not the hardihood to proclaim his plates a fair representation of the average character of the human cranium. No; when interrogated on the subject by his class, instead of a manly avowal or disavowal, he plays the jesuit, and equivocates in his reply. The following are his own words on the subject:

"You have asked, gentlemen, if the specimens of crania delineated in the plates, were not extreme cases; of irregular structure, and to be regarded as exceptions to the general rule? I have already stated, that I possess skulls of every intermediate degree of thickness, from that of the Waterman (plate II. one eighth of an inch thick) to the cast of Spurzheim; and those, also, which exhibit the frontal sinuses from the size represented in plate VIII. to those which are scarcely perceptible; *and, by visiting the anatomical cabinets of our country, the same variations will be seen in abundance.*"—p. p. 52, 53.

"The first part of this extract, I repeat, is an *equivoque*—a jesuitical reply—"a non-committal," practised indeed by the timid and wily politician; but which the man of science should throw from him, as a stigma alike on his character and calling. Yet it *may* be true. Professor Sewall *may* have the varieties of crania which he says he has. But if so, they are not an *accidental* possession. They are not, I mean, the product of promiscuous acquisition. They have been procured by the *research* and *selection* of years. And Dr. Sewall has not hazarded, I say, nor will he hazard the groundless assertion, that they are a correct representation of the average character of human crania in a natural condition.

"The assertion made in the italicised clause of the extract is also unfounded. Such irregularities of crania are not to be "seen in abundance," in the "anatomical cabinets of our country." And if they even were, the testimony borne by the fact, would avail Dr. Sewall but little. Cabinets are made up too much of rarities—of things *curious* more than of things *useful*. Hence a cranium remarkable for thickness, thinness, or any other unusual characteristic, will be preserved, while

dozens of common ones will be thrown away. Such is our passion for novelty, and deviations from the usual course of things."—p. 84.

The three articles in this little volume are each marked by that originality and vigor of thought, and clearness and force of expression for which Dr. Caldwell is remarkable. Specimens of a pure, classical style might be produced from every page of his Valedictory Lecture; but our object in the brief notice we have taken of the work was not to go into a critical analysis of its merits, but simply to present our readers with an abstract of the argument in reply to the latest, and one of the most ingenious attacks on Phrenology.

L. P. Y.

BIBLIOGRAPHY.

JOURNALS.

The Boston Medical and Surgical Journal.—We have received several numbers of this useful and valuable publication, and its pages give high testimony to the talents and science of its contributors. We regret that the length of some of the ablest papers, forbids their transfer to our pages, and the intimate relations of the reasoning, equally prohibits extracts. We must therefore content ourselves with an enumeration of some of the most important papers in the numbers before us.

On the relation between the respiratory and circulating functions. By Charles Hooker, M. D. of New Haven, Connecticut.

This is a very able paper on a subject but little understood.

The observations are correct, reasoning accurate, and inferences logical. Extracts from it, will be found in our next number.

Case of Laceration of the Iris (with a colored plate.) By E. J. Davenport, M. D. of Boston.

The case detailed by Dr. Davenport is one of much interest, whether we consider the extent of the injury, or the success of the curative efforts. The following description of the injury, is from the pen of Dr. Davenport:—

"Thursday, 28th Sept., Bartholomew Kearney, a robust Irish laborer, received a violent blow upon the left eye, from a fragment of stone. I saw him soon after the accident, and found upon examination, an oblique and irregular wound about 4 lines in extent, of the inferior and inner part of the cornea; a considerable portion of the inferior and nasal part of the iris torn from the ciliary ligament protruded through the wound and hung down upon the eye ball; the anterior and posterior chambers of the eye were filled with fluid blood, so as entirely to conceal from view the pupil and remainder of the iris; the cornea was rendered prominent by the pressure of the contents of the globe, particularly at the wounded part; the ocular conjunctiva was somewhat injected."

A portion of the prolapsed iris was removed with scissors and forceps—the edges of the wound were carefully adjusted, and a compress wet in cold water, was secured upon the eye with a light bandage; venesection and an active cathartic, with antiphlogistic diet and regimen were also resorted to. A quack entered at this stage of the case, and interfered with this scientific treatment—applying stimulating powders of calomel and loaf sugar, and ext. of Belladonna. This produced deep seated ophthalmia. All the symptoms of inflammation finally yielded to the regular use of cold water to the eye, and the daily exhibition of purgatives. The sight was perfectly restored, notwithstanding the extent of the injury. Under all the circumstances, it may be regarded a very interesting case, and one which speaks very commendably of the surgeon.

This case is followed by the report of one of *Symptomatic*

Hemiplegia, by W. J. Barbee, M. D. of Illinois. In the same number is an interesting analysis of several papers on the "*effects of low diet and imprisonment on health.*." In conclusion, Mr. Wakely states, "as the result of all the statistical facts he has seen, that the proper quantity of food for masses of men and animals, is the average quantity they eat when the supply is regular and unlimited; and that when this quantity is withheld, every degree below the standard has a corresponding death. This, though differing from Mr. Chadwick's deductions, he thinks conformable enough with the experience and conduct of mankind, who have never sighed for the age of acorn-eaters but over tables spread with Roman luxuries, or eulogised water gruel on less than £1000 per annum."

The American Medical Library and Intelligencer. Edited by Robley Dunglison, M. D. &c., Philadelphia.

This valuable work reaches us very regularly, and is always a welcome visiter. It contains a mass of valuable and trustworthy medical intelligence, and reprints of the best standard works in medical literature. Several extracts from it will be found under the head of Analecta.

The Select Medical Library and Eclectic Journal of Medicine. Edited by John Bell, M. D. &c., No. 8, Philadelphia.

We receive no "Journal" possessing higher claims to public confidence than this. The selection of books thus far, for republication has been of the best character. As far as our commendation can be of service, we bespeak for both of the above works, a liberal and extensive patronage.

The Medical Examiner. Edited by J. B. Biddle, M. D. and M. Clymer, M. D., Philadelphia. Published semi-monthly.

This is a young Journal, having, as appears from the registry of its birth, been first ushered to the light, January 3d, 1838. Its Editors, if we mistake not, are also young men; and their productions show them to be young writers.

Now there being so much of youthfulness in the concern, and so little of maturity and experience, one might suppose that there would be also some share of *modesty*, that being universally considered, if not a necessary, at least a very suitable attribute of the young. And the time we think has been, when youth, if not actually modest, rarely ventured to be openly presumptuous. "*At tempora mutantur*," and we greatly fear, "*nos mutamur cum illis.*" For this apprehension of the change in men as well as in times, we shall briefly submit a reason or two to the consideration of our readers.

In the second May number of the Examiner (the Journal we believe is semi-monthly) we have just read a notice of the "Louisville Journal of Medicine and Surgery," which we pronounce a very singular and exceptionable paper. Instead of exhibiting the slightest blush of either delicacy or modesty, it is as presumptuous in spirit, and as dictatorial in manner, as if its authors had lived, and thought and written, ever since the days of Hippocrates. With such eagerness and apparent relish do the Editors award their censure, that they might be almost supposed to fancy that they are elevating themselves in proportion as they aim at the depression of others. If so fallacious however be their notion, they are still cruder in sagacity, and scantier in knowledge, than they are in years; and they manifest in their measures even less of sound judgment, than they do of good feeling—and, in the present case, this standard of comparison is far from being lofty.

Indeed enamoured as the young gentlemen evidently are of the critic's sword and buckler, they are eminently awkward and unskilful in the use of them. Not a pass or a cut do they make at their antagonist, or rather *victim* (for their attack is on the *unarmed*) without openly exposing their own persons to a return of the assault. And, now that they have forced us to come to the rescue, that return they shall be made to

feel, unless their self-consequence should operate as a bulwark to them between truth and sense. For the truth shall be told as freely and plainly, as they have on some points told the reverse, and on others departed from courtesy and common sense.

However unceremonious and stern these remarks may be thought, we shall not fail to make them good. For on our part the contest shall be fair in principle, and full and correct in action and manner. We shall not condemn the article of the Examiner unheard, as the authors of that article have done the Louisville Journal of Medicine and Surgery. They have shown themselves whole-sale dealers, and, without quoting a line, have put their ban on that Periodical by the lump—original communications—reviews—selections,—and all. We marvel that even the title, type, and paper should have escaped such lynx-eyed pryers and sweeping condemners. As relates to their voluble and indiscriminating tirade, our conduct shall be different. We shall not only administer blame; we shall quote some of the exceptionable passages, and state the grounds of that blame. And so should every critical reviewer, who does not ape the character of a literary despot. The mere dictum of a reviewer, without his facts to sustain it, is but little better than an idle sound, and should be so esteemed.

In this way we shall enable our readers to judge for themselves of the justice of our remarks. Like a certain great personage, whose hard name we have at this moment forgotten, who constituted himself *Orator of the human race*, the gentlemen of the Examiner have arrogated as their own the privilege of judging *for mankind*, without giving a reason, and claim of course the implicit assent of contemporaries and posterity. But, without further preface, we shall enter on a brief examination of the Examiner—remarking, by the

way, that the very title has a *snarl* in it. In the article already alluded to stands the following clause:—

"Its avowed connexion (the connexion of the Louisville Journal) with the Medical School of Louisville militates, we think, against the general independence and usefulness which should constitute the distinctive character of a scientific Journal, and tends to encourage the idea that it may be made the organ of sectional feeling and prejudice."

Could any form or degree of inappropriateness between means and end, or between a premiss and an inference surprise us, such would be the effect of this extraordinary aggregation of words. A sentence (if such it can be called) more deeply marked by a want of correct information, of looser logic, or blanker unmeaningness, has rarely if ever encountered our inspection.

A connexion with a school of Medicine impair the "independence and usefulness" of a medical Journal, and render it a fountain or a repository (no matter which) of "sectional feeling and prejudice!" Wherefore, and in what way, can such an issue flow from such a source? To sustain their notion, or to render it even plausible, the Editors of the Examiner must do one of two things—or both united. They must either show that such has been heretofore the effect of such a "connexion" on a Medical Journal; or that, from the well known and necessary operation of certain *specified* causes, such must be the *novel* effect in the present instance. And they can do neither. The reason is plain. No example or causes of the kind can be adduced; because they do not exist.

Were the Editors of the Examiner but one tenth as well versed in the Medical history of our country, as, in the capacity of Journalists, they ought to be, they would not lack the information that every medical Journal of any character and duration in the United States has been in some way "connected" with a school of medicine. Nor is it at all cer-

tain, that, as yet, such publications can be otherwise sustained by us. To their very existence the patronage of schools has been hitherto essential; yet never before have we heard it alleged, that they were therefore either wanting in "independence," or steeped in "sectional feeling and prejudice." Have the Editors been privy to such allegations and charges? We confidently believe they have not. And if they even have been, the notion is groundless. To charges so derogatory none of the medical Journals of our country have ever been amenable. Or if so, perhaps the Editors, *as Philadelphians*, can name them. Their own prejudice, sectional feeling, and *dependence on others* may instruct them in the matter. For, as the very nature of their Periodical proves, *their dependence* on others is much more *servile* and striking, than that of any other Editors in the Union. Their condition is essentially *parasitical*. Do the gentlemen call for specifications on these several topics? They shall have them.

Of the New York Medical Repository, the earliest Journal of the sort, of any reputation, published in the United States, Professor Mitchell was the leading Editor. And that work was as independent in spirit, as free from "prejudice," and as catholic in doctrine as any other of the day. The Medical Museum (we believe that was the title) which subsequently appeared in Philadelphia, was established by Professor Coxe, at the request, and under the express patronage of Professor Rush. And, if we mistake not, it was a continuation of that Periodical which Professor Eberle edited at a subsequent period. Next came the American Journal of Medicine, which was founded by Professor Chapman, and edited by him for several years. Nor in changing its Editor has it changed in any measure either its doctrines or its character. It is still, in these respects, part and portion of the school in which the influence of Professor Chapman predominates.

The other two Philadelphia Journals conducted by Professor Dunglison and Dr. Bell, the latter a lecturer in the Medical Institute, a summer scholastic establishment of the place, have a connexion with schools; and so has the Medical Journal of Lexington, as well as that of Cincinnati conducted by Professor Drake. And last, though, as some no doubt think, not least, even the Examiner itself shows, in its columns and general aspect, a strong and very suspicious "squinting" toward a "connexion with a Medical school." As respects the *politics* of that Periodical we know nothing; but this we know, that its merit and influence would be reduced to a cipher, were it deprived of the matter furnished in the lectures of Chapman, and Gibson, and Horner, and Jackson, and Gerhard, and Harris, and others, all of them in some way concerned in schools of Medicine. Those lectures supply it with the *pap-food* of its *baby-existence.* And we further know that the Faculty of the Louisville Medical Institute has no more influence in the *actual government* of the Louisville Journal, than it has in the government of any of the Periodicals published in Philadelphia. Some members of the Faculty write for it, like other contributors; and there the matter ends. So exceedingly little do *certain savans* know, who yet affect to be wonderfully sapient, respecting the mode in which things are managed in the free, manly, and independent West. We shall only add under this head, that did we deem it requisite to resort to Europe for illustration and proof of our present position, we could show that most of the important Journals, Dictionaries, and Cyclopedias in medicine, which have appeared in Great Britain, France, Germany, and Prussia, for the last half century, have had some "connexion with schools of medicine." In truth, in every part of christendom where they have appeared, such works succeed best, and become most useful, under such connexion.

Have all the foregoing Journals then been thus connected with schools of medicine, and have they still maintained their "independence," and escaped the contamination of "sectional feeling and prejudice?" Have they remained exempt we say from all those evils, and is the blight to fall for the first time on the Louisville Journal? Or do the Editors of the Examiner mean to fasten their condemnation and its consequences, by wholesale, on all the Medical Journals of America—their own not excepted? But we must dismiss this point, so miserably silly, and try to find, in another, matter more worthy of attention and discussion.

To aid us in this research, we call on the Editors of the Examiner to disclose to us any causes, from which other Journals are free, but which operate on the Louisville Journal, *through the Louisville Medical Institute*, in such a way as to take from it its "independence," and to adulterate it with "sectional feeling and prejudice." But the Editors are silent—rather not here to answer to our call. We are bound therefore, perhaps, by the canons of courtesy, to answer for them ourselves. And though we may not lay to "our souls the flattering unction" that we shall answer as ably as they would; yet we shall answer honestly to the best of our ability. To act with the greater clearness and justice, we shall mould the entire matter of the concern into the form of a syllogism.

Well then, say the Editors, or (which amounts to the same thing) we their respondents say for them;

In as much as the New York Medical Repository, the Medical Museum, the American Journal of the Medical Sciences, with some half-dozen other Philadelphia Journals, and the Medical Journals of Lexington and Cincinnati—in as much as these several Periodicals have been "in connexion with schools of Medicine," and have *not* lost their "indepen-

dence," nor been contaminated in their characters with "sectional feeling and prejudice;" and

In as much as the Louisville Journal of Medicine and Surgery is also in like connexion with a school of Medicine; therefore it *will* suffer these several evils—*will* lose its "independence," and be infected to *uselessness* with "sectional feeling and prejudice."

Now to us this appears to be very sorry and inconclusive logic. It is far from reaching the end at which it aims. As faithful factors to our distant principals, therefore, we must resort to another and *better* form—provided we can find one of that description. And here is the best that presents itself.

Because within the eastern atmosphere of the United States, a connexion between Medical Journals and Medical schools does *not* destroy the usefulness of the former, but evidently increases it; therefore, under similar circumstances, a similar connexion between Schools and Journals, in the atmosphere of the west *must* destroy it.

Now so perverted and fallacious, as will appear presently, are the notions of the Editors of the Examiner respecting most matters in the West, that, but for one consideration, this might be received by them with great favor as an incontestible syllogism. And that consideration is, that the Medical Journals of Lexington and Cincinnati, though Western productions, are not destroyed in their usefulness by a connexion with their respective schools. Why therefore, they *may* possibly think of inquiring, should the effect be different on the Louisville Journal? We cannot tell. Nor, involved as the whole matter is in inextricable folly and absurdity, do we feel inclined to attempt its disentanglement. We must therefore return the enigma unresolved to those who framed it, and proceed in our remarks.

Still clinging with parental fondness to that child of their fancy, that the Louisville Journal was to be injured, in the points already mentioned, by its connexion with the Medical Institute, the Editors observe, as if in confirmation of their conjecture:—

"Nor, we must confess, are these doubts altogether removed by a perusal of the number which is before us."

In plain English; the gentlemen here virtually assert, that they have actually discovered in the first number of the Louisville Journal evidence of a "*want of independence*," or manifestations of "*sectional feeling and prejudice*—or of all of them combined. This statement merits neither more nor less than an unqualified contradiction. *It is not true.* Nor will the authors of it deny our reply *in facts*, whatever they may do *in evasive or deceptive words.* To that effect we *defy them.* They cannot specify in the Louisville Journal a single sentence, which bespeaks in it either a *dependent spirit*, the narrowness of "sectional feeling" or the blindness or perverted vision of "prejudice!" That there is in it some manifestation of *Western* feeling is perhaps true. Not however on account of its connexion with a school of medicine; but because it is a Western production; and ought therefore to be in a reasonable degree instinct with the spirit of the country. We do not mean a narrow, rigid, and exclusive spirit, penurious of regard and good will toward all other places. Such churlishness of temper, wherever it may prevail, is highly discreditable, and no less injurious. We mean that lofty pride, and manliness of attachment, which the high-minded and virtuous every where feel and cherish toward the spot which is consecrated to them by their friends and families, altars and homes. It is a sentiment next akin to that which a noble spirited youth feels toward a mother whom he adores, and for whose protection from

wrong or insult he would surrender up his life. Did we cherish the slightest disposition to visit on the *many* the faults and follies of the *few*, we could name to the Editors a certain city, bounded by two rivers, to which such charges would be much more applicable, and which might be pronounced without much of either trope or figure, a hot-bed and nursery of "sectional feeling"—especially in medicine. But perhaps the most offensive remarks made by our Editors on the Louisville Journal, are contained in the following extract:—

"The original communications are in general *trite* and *uninteresting*. The analytical notices are of works which have for some time been before the public, and upon whose merits they have long since decided. The selected department is meagre, and can lay no claims to *novelty*."

This paragraph, designed we presume by its authors, as quite a broad and bright display of judgment and taste, and no doubt of "independence" and genius also, may be characterized in a few words. It is shallow and arrogant, indelicate and *untrue*. Those who assume the high and responsible station of critics, before writing as the Editors have here done, about the productions of *men*, should be sure to see that their own *beards have grown*, and that they have nothing about them, either in mind or manners, of the untrained stripling. The task they have undertaken requires this. To review and criticise is no boy's play; though in these days of *affected* precocity and *real* self-sufficiency, too many boys have the presumption to engage in it. Critics and reviewers in pretence and ambition, should bear in mind, if they have ever read it, the distich of the satirist:—

"Let those teach others, who themselves excel;
"And censure freely who have written well."

May we judge from such of the products of their pens, as have fallen under our notice, these lines inculcate great

mildness of criticism on the Editors of the Examiner. However vainglorious may be their opinion of themselves, those Journalists are not the Jeffereys or Johnsons of the present day. Nor do we feel quite authorized as yet to fasten on them the *sobriquets* of the Thersiteses and Zoiluses of former days. From the surly character however of the morning of their career, we would be reluctant to guaranty either good nature or liberality to its meridian. Under the improvements which labor and perseverance may yet produce in them, they have no strong reason perhaps to despair of an ample share of the renown of their two great prototypes, to whom we have just referred. The young gentlemen's more experienced and better informed acquaintance ought to apprize them, that acerbity of temper rarely diminishes with the progress of years. We are not convinced of the entire correctness of sentiment in the author of the Sketch-Book, when, in descanting on the character of Madam Ripvanwinkle as a scold, he says, that a woman's tongue is the only edge-tool that grows sharper by use. It appears to us doubtful, whether the same be not true of the pen of a critic—especially of one who has a native disposition to be *censorious* and *snappish*. The boy-critic who begins with a snarl, is apt to swell his note to a growl and a bark, and perhaps to conclude it with the howl of castigation. On these points it might be well for the Editors to be informed; that, being forewarned of the evils, they may endeavor to escape them. Of one thing to which they seem strangers, we beg leave to assure them. It is easier—much easier to write a respectable book, than an able review. In borrowed language, there are,

"For *one* who *writes*, full *ten* who *judge amiss*."

Yet, like certain pretenders we could name, every conceited sciolist who can nib a pen, and soil paper with it, deems himself competent to the perpetration of a review.

One of the epithets applied by the Editors of the Examiner to the "original communications" in the Louisville Journal, is "trite." This term, as here used, is not only pert and discourteous in itself; in its application to the communications in question it is *untrue*. We do not proclaim the unqualified excellence of those papers. That would be unbecoming in us, did they even possess such excellence. Their general merits however we freely leave to the decision of others, who are competent judges. And by such judges they have been already perhaps sufficiently commended. But, whatever other faults and imperfections may attach to them, we deny that there is any *triteness* in them. On the contrary, we contend that some of them are, in several of their features, altogether *uncommon*. This is true of the case of "uterine rupture." We know of no previously recorded case of the sort, from which it does not in some interesting respects materially differ. Nor, we venture to assert, are the Editors prepared to cite such another. If they can, we shall acknowledge our indebtedness to them for a reference to it.

Another case contained in the Journal is altogether *unique*. We allude to the extraordinary cure, without suffering or complaint, of a compound fracture of the thigh-bone, in the Louisville Marine Hospital, by the use of the bandage. That cure, we repeat, as far as our surgical reading has extended, has no precedent. If such another be on record, we know not where; and will thank the Editors of the Examiner to inform us. On one point we are confident. No record of the kind enriches the annals of the Pennsylvania Hospital. On the showing of the Editors of the Examiner themselves, not more than *two certainly*, and *probably* only *one* case of compound fracture of the os femuris has been cured in that institution, since its establishment, 86 or 7 years ago. But many cases of the kind have terminated fatally.

So far then is the uncommon fracture-cure, related in the Louisville Journal, from being either "trite" or "uninteresting," that we are almost tempted to believe, that even the Editors of the Examiner, lore-fraught as they are, might learn something useful from it—if indeed they could forget that it occurred on the *sunsetting* side of the Schuylkill. Though we charge no portion of the city of Brotherly-love with the worship of the Crescent, we notwithstanding know that for whatever they deem new and acceptable and useful, not a few of her citizens, if indeed any thing can induce them to divert their eyes *from home*, are strongly inclined to *look toward the East;* and to say of the West, "can any thing good come out of Nazareth?" Whether the Editors belong to this East-admiring and West-condemning coterie, we leave to their writings to decide. Nor do we deem the result of the reference doubtful.

Once more, as respects the "*triteness*," with which the reviewers charge the "original communications" in the Louisville Journal. Where, we ask them have they seen on record such a case of uterine hemorrhagy, as the first one described by Dr. Bell? Or where a case of diabetes mellitus, in a child only "*fifteen months*" old—combined with other very threatening symptoms—successfully treated? These two cases also are exceedingly rare if not *unique* (the last in particular we believe *is* unique;) yet are they *unveritably* pronounced "trite and uninteresting," by either the ignorance, or recklessness of the reviewers. Finally; though we are far from claiming to every "original communication" in the Louisville Journal the attribute of *novelty*, yet are we equally far from believing, that the work contains a single case, to which an enlightened and liberal-minded physician will attach the disparaging epithets, "trite and uninteresting." To a brace of

unannealed and snarling Editors does the honor of the baptismal process belong.

"The analytical notices" (in the Louisville Journal) say those gentlemen, "are of works which have been for some time *before the public*."

Indeed! Before what public? The public of Philadelphia, and a few perhaps of the Atlantic States—or rather portions of those States. But does that constitute the vast "public" of America? We should rather say, in terms more circumscribed, does it form the ever-growing and almost boundless "public" of the Great Western Valley and States, with their inundation of widely-scattered and still accumulating millions? Oh! no; far from it. Though we do not charge the Editors with the sin of being sufficiently versed in geography and statistics to be masters of the fact; yet it certainly *is* a fact, that, compared to the West, the Eastern States are already but a fraction of the Union in extent, and, in a few years, will be the same in population.

Because then a fraction of that Eastern fraction (for such of necessity is the largest number we can include in the computation)—in plainer terms; because an inconsiderable part even of the Atlantic public had some previous knowledge of the books reviewed in the Louisville Journal, does it follow that those same works may not with propriety be reviewed again, that their contents may be made known to the physicians of the West, not perhaps one in twenty of whom (or in a still larger disproportion) has ever opened a transmontane Journal? Or do the Editors of the Examiner vainly imagine that even *their* Periodical will shortly find its way to every Western practitioner of medicine, and, by inspiration, or some other mystic and pervading influence, imbue him with a knowledge of all the books reviewed in

Philadelphia? It would really seem that such is the notion of these city-nurselings. They swallow down the delicious conceit, that they bask in the blaze of the central orb of American science, which, like the sun to the planets around him, diffuses heat, and light, and life to every other section of our mighty empire—and that, without any collateral aid, such light must be *all-diffusive*. In a spirit of like vanity and contractedness does the Chinese boor or fisherman dream that his country is the central and most glorious spot of earth; and that from it, as a fountain-head, flow knowledge, and civilization, and worth, and greatness, and all else that is valuable to man. To make this case the stronger on our part, and the more silly and preposterous on the part of the Examiner, the volumes reviewed in the Louisville Journal are London editions of works that have not been reprinted in America. Their contents therefore must circulate among us through Journals; else they cannot at present circulate at all. And Western Journals must furnish them chiefly to Western physicians. At the very commencement of the review of Ramsbotham, the reviewer makes, as follows, a remark to this effect:—

"Notwithstanding the British age of this work, its many excellencies and *extreme scarcity* in our country, will plead in behalf of a review of its observations and principles."

Had the Editors taken the trouble to read this sentence, it might happily have removed a portion of that thoughtlessness and want of information, which so shamefully abound in them, and so thoroughly unfit them for the work of reviewing.

Nor, say our Journalists, is there any thing "*novel*" in the "selected department" of the Louisville Journal. Nothing "novel" in "selected" articles! How can there be? In the very nature of the case, the thing is impossible. To found

an objection on it therefore, is pre-eminently absurd—the act only of the imperceptive and unreflecting. It is one of those blunders which men never fail to commit, when they attempt to figure in spheres that are above them, or plunge into profounds which they cannot fathom. Familiar but practical and striking illustrations of this we have in the grotesque appearance of the clown, when he apes the fine gentleman, and in the ridicule incurred by the matron of forty-five, when she assumes the costume and attempts the graces of the beauty of eighteen. Nor does the affectation of mental qualities far above those possessed by the pretender, become less certainly an object of derision. From this truth the Editors will do well to take warning.

Selected matter is but another form of expression for matter *previously known.* Hence it cannot be new. Novelty and selection are as literally and essentially incompatible with each other as *new* and *old*—or *past* and *present.* Such is the meaning of the term "novel" considered in the *abstract.* Otherwise considered, it is altogether *relative.* What is *novel* to one person, may be *common-place*, if not *obsolete*, to another. For example; what is, by use and reiteration, tattered and thread-bare to such *every-day* and mighty readers, as the Editors of the Examiner, may be perfectly new to us poor back-woodsmen, who have hardly time to read a little on *Sundays;* and have even then but few volumes at our command.

But we must take leave of this puny and pitiful article in the Examiner, on which we have already dwelt to an extent far—very far beyond what it deserves. For our lengthened consideration of it, however, we have had a reason which we shall presently make known. The article itself, so trashy is it in matter, and so crudely and feebly is that matter tacked together, is in all respects contemptible. Besides

being miserably composed, it does not, from beginning to end, present a single sustainable position. Its leading features are emptiness and arrogance, injustice and unsoundness—the two latter, as relates to substance, being tantamount to untruth. Thus made up, its charges against the Louisville Journal are as light and vain as the idlest rumours, and its assault, though sufficiently rude and impertinent, as harmless as the flutter of the butterfly's wing. Nor does it derive either weight or force from its conexion with its authors; because, they have themselves neither the one nor the other—*ex nihilo nihil fit.* Nor will they derive them from the penning of such articles as that we are considering.

Under these circumstances, for the mere sake of defending the Louisville Journal against such an attack, we would not have wasted a drop of ink, nor consumed a single moment of time. The sacrifice thus made, however small, would be far beyond the end to be attained by it—a defence against sophomorical pertness and imbecility. Or if the censure of the Examiner has any weight, it is because *strong* men *write* for it; not because *weak* ones *conduct* it.

True; the Louisville Journal has its faults. We are perfectly aware of them, and could point them out much more judiciously and usefully than the Editors of the Examiner. We moreover sincerely regret them; and though we were not in a condition to avoid them at the time, and are still somewhat embarrassed by the wants and difficulties of a new institution, (a state of things for which liberal and magnanimous reviewers would make due allowance,) we notwithstanding trust, that, by industry and perseverance, and the new resources that will accrue to us, we shall soon be prepared to render the Journal an object much more worthy of public patronage. Still, with all its "faults and imperfections on its head," it defies the Examiner, and tells it distinctly,

that it cannot injure it. The great and still increasing medical public of the West will look through their own eyes, and decide with their own judgments, not with those of uncon-cocted Eastern Journalists, whose weight they do not feel, whose high qualifications have not yet been made manifest to them, whose *knowledge of Western affairs* is but another name for *ignorance*, and to whose authority therefore they will not submit. From Journalists however of matured judgment, and enlightened and liberal views, cultivated taste and accomplishment in letters—from such writers, strictures and suggestions calculated for the improvement of the Louisville Journal, and the promotion of medical science, will be always received in good part, and duly appreciated; and as occasions may offer, the favor will be returned.

Is any one disposed to put to us the very natural question, why, if we deem so lightly of the attack by the Examiner, we have spent so much time, and occupied such an extent of space, in the discussion and refutation of it? We answer, with equal promptness and candor, not on account of ourselves or of the Journal we superintend; but to disabuse that portion of the public which is of too ready a belief, and for the benefit of the writers who made the attack. We clearly perceive that, as composuists and Journalists, those young gentlemen are strangers to themselves. They set on their own qualifications and performances in their new vocation, an estimate which will not be endorsed by the public. On these points they stand in great need of correction and reform. They require to be saved from their worst enemies—*themselves.* And, as they have thrown themselves rather unceremoniously into our path (out of which we would not have turned to encounter them) we deemed it our duty to take part in the performance of the work of charity to them. And however pettishly they may fret and fume, champ the bit and spurn

the ground, and swell and bristle with resentment now—ay, and however much they may affect to scorn our advice, and repel our precepts—into whatever explosion of temper they may plunge themselves, on reading this critique, they will not fail to thank us hereafter for the rebuke it contains. If they be capable of being profitably schooled by admonition and experience, they will learn and realize in time to come, the following lessons; that the "little brief authority" which they have assumed as Journalists, sits on them neither easily nor gracefully; but that it has induced them to play before "high Heaven" certain tricks of station both awkward and unbecoming; that the fancied exaltedness of their new vocation has raised them in sentiment above their level, given them a vertigo, and rendered them dim-sighted toward common concerns; and that the familiar use of the royal plural terms, WE and US and OUR, instead of the singular ones, *I* and *me* and *my*, has conferred on them an imaginary right to dictate and control. They will learn, in a word, that in putting the buckramed costume of the reviewers *on*, they have put the simple garb of modesty and common sense *off;* and that the exchange was an unfortunate one.

Under these impressions, we have begun the enterprise, by honestly endeavoring to "set the young Editors up a glass, in which they may see the inmost part of them"—we mean as Journalists and writers. And we trust that others, prepared for the task, and in more immediate contact with them, will unite with us in the benefice. We doubt not that the enterprise, neither grateful nor perhaps easy in performance, if duly persevered in, may eventuate in usefulness. For we trust that the young Editors do not belong to the class of *unimprovables.* Under this presumption and to show that we are in earnest in our desire of reform, we have a few more

remarks to make, and a word or two of advice to offer. And we shall begin with the latter.

Until they shall have become then much more expert in the trade of *guessing* than they are at present, we would seriously advise the Editors of the Examiner to *read the whole* of the works they presume to review, and not remain content with a mere glance at their titles, and the headings of chapters and articles—as they do now. By pursuing this course, with faithfulness and industry, and in no other way they *may* perhaps learn in time to become sufficiently acquainted with the subjects of their reviews. And it will not we think be amiss for them to adopt as a rule of action the maxim, that an author "rarely writes the worse for knowing something of his subject." To this rule we feel confident the gentlemen did not conform, in preparing for their assault on the Louisville Journal. They never thoroughly examined the articles of that Periodical, else, if they possess either pride, capacity, or principle, they never could, on account of their own reputation and standing, have so shamefully misrepresented them. They took a mere glance at the captions of the number, and then, from a predetermination to that effect, assailed and defamed it.

Nor do we consider the cause of this proceeding by them an inscrutable secret. The Louisville Journal is a Western production; and its Editors have been educated in Western schools. The Editors of the Examiner, on the contrary, belong to some little self-sufficient closet-formed Eastern *clique*, in whose restricted and purblind view of things, the entire West is still in its primitive backwoods condition, and its affairs in such bad odor, as not to be fit to come "between the wind and their nobility." This being the case, prejudice and imagination would soon do their work. Smellfungus-like, the

Editors would pass in fancy, from the ill-savored title-page, to the close of the work, crying, fie! fie! to the whole—to one part, because it was "trite"—to another, because it was marked by "sectional feeling"—to a third, because it was "wanting in independence and novelty"—and to a fourth, because it was already known in Philadelphia and its environs! Yet is the real groundwork of all these complaints, not in the vitiated odor of the things complained of, but in the morbid nasal sensibility of the complainers.

Nor, as long as they remain ensconced within the "prejudice and sectional feeling" of their near-sighted coterie (we say with confidence "prejudice and sectional feeling," for, in thus turning on them their own weapons, we are sanctioned alike by truth and justice)—nor, as long as they continue under the control of such narrowing and perverting influences, will the Editors of the Examiner ever attain a knowledge of the West, or of aught that belongs to it, sufficient to enable them, when treating of it, or of any of its concerns, to do justice to their subject, or credit to themselves. We advise them therefore as sincere well-wishers, to do one of two things, and to act in the matter promptly. Either break the trammels of early prejudice, make a visit to the West, look on this new theatre of nature, as the Creator has formed it—vast in outline and feature, magnificent in workmanship, radiant in glory, and advancing with unprecedented rapidity to a corresponding condition in all that belongs to the achievements of mind (in which case their own minds can hardly fail to be dilated and raised by the grandeur around them)—let them do this, or never write again on any thing, whether it be a product of nature or art, of mind or matter, that lies westward of the Allegheny mountains—or even perhaps of the river Schuylkill.

Should the gentlemen *oblige* us and themselves by making

the proposed visit (for we are ready to admit that the *favor* might be mutual) we promise them, in addition to sights such as they never witnessed, and conceptions which they never experienced before, a kind and cordial welcome, courteous treatment, and liberal hospitality. And we further promise them, that, their tour being ended, they will return to their homes better pleased with themselves—pleased we mean in a higher and manlier style of feeling and sentiment, than they were when they left them; and, at the same time, thinking much more exaltedly and justly of the people as well as of the States and other things of the West. They *may*, provided they improve their opportunities, be so much advanced in intellect and amended in feeling, as to have somewhat of the character of *American patriots*—a title with which it might be premature to invest them at present.

Of one thing however we gravely warn them; not to speak or act in the West, in as utter disregard of courtesy and common sense, as they write in the East. For, in the words of the dramatist, though the sons of the West, like the noble-minded Hamlet, are neither "splenetic nor rash, yet have they in them something dangerous, which wisdom ought to fear." Though, toward strangers who approach them respectfully, no people are more kind and complaisant, pacific and protective; yet, when causelessly assailed or offended, whether by strangers or others, none are more prompt and dextrous to prepare and employ "*A whip for the horse, a bridle for the ass, and a rod for the fool's back.*"

The Transylvania Journal of Medicine—Published quarterly, under the superintendence of the Medical Faculty of Transylvania. Lexington, 1838.

We should have been much obliged to the recent Editor of the above Periodical, if he had kept his silence in regard to the Louisville Journal of Medicine and Surgery. And this he might have done with great propriety, for we made no kind of reference to the Transylvania Journal, nor did we invite the criticism of its Editor, by sending him the work. He had to borrow a copy of it, in order to assail us. And in view of the delicate relations which the two Journals sustain toward each other, we should have supposed prudential considerations would have prescribed a very careful course of conduct on the part of both prints in relation to one another. But we have been disappointed—a coarse imputation has been cast upon us, and we feel it incumbent on us, to repel it. No other consideration could have induced us to say one word that could be construed into an attack upon the Transylvania School of Medicine, for really we have no disposition for any thing of the kind. The Journal of Medicine was placed in our hands for a very different purpose, and to that we desire to devote it.

The ground-work of our offence, was in republishing the Introductory Discourse of Professor Caldwell, and we have no apology to make for the sin. That gentleman we venerate and respect as one of the ablest medical teachers in the country—as the Father of Western medicine, and as one who has done more to elevate the literature, science and philosophy of the West, than any other individual in it. His age, his services to science, his zeal, energy and abilities, all entitle him to our regard, and we honestly think that his youthful assailant might be much better employed, than in pouring

forth a continual stream of invective and malicious pasquinade, which are quite unbecoming in so young a man, especially when directed against a gentleman who may be regarded in many respects, as the Nestor of American physicians. In reviewing his course toward Professor Caldwell, his ears should tingle with reproach, and his cheeks be mantled with shame, whenever his memory calls up the name of the Ex-Professor of the Institutes of Medicine in Transylvania. We shall endeavor to show that he is in rather an awkward predicament in relation to the matters involved.

The following remarks are made by the late Editor of the Transylvania Journal, in the last number of that Periodical. After mentioning the Introductory Lecture, and the Eulogy on Professor Physick, he says:—

"While they exhibit his powers as a special pleader, and the energy with which he engages in his enterprize of establishing a Medical School in Louisville, they show also the inconsistency of his character, the rancor of his hatred to Transylvania and Lexington, and his disregard for truth."

This attack on Professor Caldwell is virtually one on the Louisville Journal of Medicine and Surgery; for it is represented as a vehicle for the propagation of "inconsistencies of character," "rancorous hatred to Transylvania and Lexington," and statements exhibiting a "disregard for truth." And we are reduced to the alternative of either sitting down quietly under these imputations, or of showing that the statements do not deserve the character which the Editor has given them.

And now what are the averments, upon which the Editor of the Transylvania Journal founds the above charges? Here are his selections from the first number of our Journal:—

"Dr. Caldwell openly asserts and publishes to the world that "*Transylvania is a ruin!*" "*Her medical department cannot be maintained for want of the necessary means of instruction!*" Transylvania has been precipitated "*with a*

ruinous crash from the proud elevation to which industry, talents and energy had reared her."

We shall consider them in the order in which they are here named, and first:—

"*Transylvania is a ruin.*" Will any man undertake to deny the correctness of this opinion? Where is the proud front she once presented? What has become of that high reputation, which once made her halls the centre of attraction to the whole valley of the Mississippi? How is it that her character has been frittering away for years, until scarcely her name is left? And why is it, that whereas the fact of being an *eleve* of Transylvania, was once a passport to respect and confidence it has now become an absurdity and a thing of ridicule? Go look at her deserted halls, survey her meagre classes, look abroad at other colleges of the State, that started into being but yesterday, compare the expression of public sentiment in regard to them, with that in reference to Transylvania, make a comparison of their means of usefulness, with the destitution, the nakedness and impoverishment of Transylvania, listen to her imploring petition to the Faculty of Bacon College, to come and take possession of her walls, and then answer the question—"is not Transylvania a ruin?" In her desolation, her name has become but a bubble on the stream, which floats in sight and perishes at the touch. Notwithstanding the ravages of neglect, the moulderings and dilapidations of time, the windowless and doorless condition of the deserted cabin of the wilderness, it may still preserve to some extent an outline of its former state, and afford a species of shelter to the benighted traveller, but it may be, nevertheless, a ruin.

Second specification—"*Her medical department cannot be maintained for want of the necessary means of instruction.*" This is nothing more than an expression of the *opinion*

of one, who had the best opportunities of knowing the resources of the department. The Professor certainly has a right to form an opinion of this kind, and he may have as he thinks good grounds for it, and it may even differ from that of the Editor of the Transylvania Journal, without involving a "disregard for truth." This is indeed strong language for a man so young as he is to use. But what are the facts? Is it not notorious that the anatomical department of Transylvania is deficient in the means of instruction? Has not the deficiency been a fruitful source of chagrin and mortification to the Professor of Anatomy? Has it not been the practice to discourage dissections, in that school, on account of this defect? And in view of the vigilance exercised in Lexington, in Fayette, and the neighboring counties, in watching the dead, how can this "means of instruction," be otherwise than defective? If there shall be improvement in this matter hereafter, it will be no cause of chagrin to this "Journal."

Again,—was it not once the proud boast of Transylvania, that her prominent teachers were gentlemen who had been long acquainted with the peculiarities of Western disease, who had grappled with all its varieties, and had thereby adapted themselves to the task of moulding young men to Western practice, better than any transmontane school? Upon this she rested her claims to superiority in a great degree, and upon measuring herself with the Ohio Medical Colleges, abated not a whit, her claim to pre-eminence. These are notorious truths, and yet as soon as she gets her leading Professors from Cincinnati, they are transformed into what she did not before consider them—among the ablest teachers in the country. If a young man, who had been taught through one course of Lectures in Cincinnati under these able teachers, presented himself to the Transylvania

Medical Department, she would not recognize his tickets. And as she had not such Western teachers at the time the Introductory was published, as she had before, we think it clear, if her former principles on the subject were correct, that she was "defective" in the "means of instruction."

But let us look at the matter in another light. Instead of the modest annual announcement which she used to issue, her present efforts are a series of boastings, advertisements extraordinary, and a resort is made to a system of puffing, which she once would have thought, *not* well adapted to an elevated school of medicine. In all her disruptions, revolutions, turmoil, strife and confusion, she is a constant gainer, and regularly passes through the gradations of great, greater, greatest, notwithstanding the stereotyped boast at each new turn of the Kaleidoscope, that perfection has been attained. Do vacancies occur in the several chairs? The trustees go to work and fill them, and then the public mind is agonized, the ear of day is pained with the blasts of the trumpet, proclaiming that the vacancies are filled with the *ablest* talent in the country! Do some of these *ablest* teachers retire? *abler* ones take their places! Then comes sweeping upon the public ear, an account of the perfect arrangement that has been made, but some little matter turns up that requires additional change, this is called improvement, and we ask the Editor of the Transylvania Journal if these changes and improvements, do not clearly express the fact that there was "deficiency in the means of instruction?" Was there not some defect in the means of instruction, that required change and improvement? And if so, is not the point established, which we engaged to prove?

But an instance or two will best illustrate this matter. We select the one in reference to the chair of Medical Botany. Upon the reorganization of the school, great boastings took

place in regard to what the school was about to do—among the improvements, we find the following: "the Lectures on Materia Medica, will be illustrated by the exhibition of specimens of the various articles referred to, and by a series of *large drawings* of all those plants from which the more important medicines are obtained, executed expressly for the Professor (Short) under the eye of one of the first Botanists in Europe." This was the boast in July 1837—then the "*large drawings*" were very valuable, and their exhibition was to be very useful to students of Transylvania. But alas! a pin gets out of place—the Professor of Botany deserts the *flourishing* school, and brings away the "drawings" with him to Louisville, and then Medical Botany after an undisturbed residence of twelve years in the school, becomes an idle song. As soon as the "large drawings" are lost, the trustees determine that *Botany* shall not be taught in the school any longer—classes had been amused and defectively taught with it twelve years, and *Therapeutics* are substituted in its place. It reminds us of the conduct of a certain gentleman, who, after the torrents of rain commenced falling, importuned Noah to admit him into the Ark and kept up his entreaties until the water made its way up about his neck, and finding he had made no impression upon the feelings of Noah, he turned off with a sneer, swearing that he did not care, he did not think there was going to be much of a shower any how. This is about the conduct of the trustees in regard to the "large drawings" of medical plants—when they were to be used in Transylvania, they were very fine, but now that they are to be exhibited in Louisville, the "drawings" are not worth looking at, and the whole science of Botany is expelled from the school. Listen to the advertisement of the Transylvania Journal of Medicine on this subject—"the opportunity," arising from the resignation of Professor Short, "was also

taken to change the character of the chair, to which Dr. Mitchell was transferred, from that of Materia Medica and Medical *Botany*, to Materia Medica and *Therapeutics*, a change by which it is believed it will be materially improved. [The everlasting song in every change.] *This branch of medical instruction will be more practical in its nature than it has heretofore been, &c.*" If then this change makes the course of medical instruction more practical than it "has heretofore been," was not the means of instruction defective? We ask this question pointedly—we found it upon a declaration made by the Editor in the last number of his Journal, a declaration which says nothing more nor less, than that the course of instruction was defective, and the deficiency has been remedied. For saying it was defective, Professor Caldwell is denounced as having no regard for truth, and by implication we are included in the denunciation, but the Editor of the Journal of the school can say it, and claim honor and credit for doing so. And at this point it may not be amiss to remark that the Editor says: "her means of instruction, ample as they were, have even been increased and improved." Now the latest increase in her means of instruction at the time that statement was penned, was the election of the Editor to one of her Professorships, and the plain English of the matter is—since I have been made Professor, her means have increased and improved.

If her means have heretofore been on a par with the declarations of her friends, why all these changes of men and measures? Why is it that peal after peal of mutation, breaks upon the startled ear of the public, and while it is listening to the dying echoes of the one that rides upon the departing wing of the gale, another, a louder, and a different blast, bursts into being, and sweeps along before us? What are we to believe, in the multitude of contradictions? We are com-

pelled to say, if reliance can be placed upon the statements of the Trustees and the Editor of the Transylvania Journal, that the "want of the necessary means of instruction in the Medical Department of Transylvania" is clearly proved. We pass to the last specification.

3d. "Transylvania has been precipitated" '*with a ruinous crash from the proud elevation to which industry, talents, and energy had reared her.*"

The Editor of the Transylvania Journal, gives something like evidence of the truth of this, by endeavoring to meet it with a false issue, for surely he would have preferred a true one if he could have made it. The remark does not express that Transylvania has been thrown lower than the Louisville Institute, and yet the Editor says, in an attempt to meet this and the other specifications, that the Transylvania class was almost three times as large as that of Louisville. The true comparison is between her class, and those she has had heretofore, and we assert that her two last classes have been *smaller* than her preceding ones. And yet according to the Editor, it is "flourishing" while it is evidently dwindling. But we approach strong facts upon this point.

The "proud elevation" of a Medical school depends very much upon the moral standing of its Faculty. If they add to their talents, energy and industry, the due performance of their various duties to society, if they show themselves friends to virtue, and foes to vice, they must acquire in every intelligent community, a high and merited distinction. And by parity of reasoning, we may say, if they show themselves indifferent to these things; if careless whether their associations are moral or immoral, virtuous or wicked, the school in their hands cannot hold an elevated standing. Of a high moral character, Transylvania was once quite tenacious, and those who attained elevated honors in her temple, were obliged

to be of good report. Whether this is yet the case, we now propose to enquire.

In calling up matters connected with an individual, who is not directly involved in the transaction which has called forth this rejoinder, we beg leave to say that we endorse neither the truth nor propriety of the criminations and language found in the resolutions. The truth of the charges, is no concern of ours, it is the position in which the Editor of the Transylvania Journal has placed himself, that chiefly concerns us, and this we design to exhibit. So far as the gentleman alluded to is concerned, we assure him that we intend no assault upon his character, nor insult to his feelings. And now to the subject in hand.

In 1834, a pamphlet appeared in Lexington, entitled "Thoughts on the policy of establishing a school of medicine in Louisville, together with a sketch of the present condition and future prospects of the Medical Department of Transylvania University." The pamphlet caused a great sensation at the time—the Professors felt themselves deeply insulted, and all connected with the school, all who felt an interest in its fortunes, looked upon the work with a due degree of abhorrence. Some of them carried the feeling into action, and the Editor of the Transylvania Journal, unfortunately not being able to look very far down the vista of time, was one of the most active in taking measures to blunt the sting of the pamphleteer. A meeting of the Medical class was gotten up to take the matter into consideration, and this meeting appointed a committee to investigate the conduct of the author of the "Thoughts, &c." The committee consisted of four persons, among whom was the Editor of the Transylvania Journal of Medicine, at present a colleague and supporter of the author of the pamphlet. It has always been understood that the Editor drew up the preamble and resolutions; but we lay

no stress upon that—it is enough for us, that he was one of the committee, that he met with them, entered into their counsels, assisted in making the report to the meeting, and was active in the whole proceeding. He did all that he could, to blast and infamize the character and standing of the writer of the pamphlet forever, and he went just as far as was possible, to make Professors Caldwell, Cooke, Richardson, Short and Yandell, among the purest, brightest and ablest intelligences of the time, by the strongest resolutions he could report in their behalf.

We subjoin a few specimens of the manner in which he spoke of his present colleague.

1st. "Resolved, That it is the duty of the Medical Class, to express in the most unequivocal and public manner, the deep sense of indignation with which they view this *base* attempt of Dr. C. *to injure the reputation of their Alma Mater and his.*"

The statements of the pamphlet in reference "to the vote of thanks recently passed by the Class," are represented, "*as a base and dishonorable misrepresentation, wilfully made, for, we fear, the most wicked of purposes.*" There are no half-way measures here—it is "unequivocal" language, with a vengeance. Adjectives are profusely sprinkled down, to give force to the criminations.

Passing by the eulogistic resolutions upon the Professors of the school, we turn to those which address themselves directly to the gentleman then empaled by the Editor.

The 8th says: "Resolved, That we hold the insinuation of Dr. C. as to his intimacy with the present Class, and several preceding ones, to be untrue; *and considering his moral depravity, as clearly displayed throughout this odious publication, we cannot but consider it a base slander upon the Class.*"

10th. "Resolved, That the stream of foul calumny which runs through and pollutes the pages of his pamphlet, has its origin in disappointed hopes and multiplied fruitless endeavors to reach a chair in this school, as is clearly shown

by the pamphlet itself, and as may be positively proved if he dare deny it."

11th. "Resolved, That as a whole his production is pre-eminently infamous—false in its statements, calumnious in spirit, rancorous in tone, coarse, vulgar, undignified and ungentlemanly in language, and wholly unworthy the credit of the community."

The reader must understand this as the calm, deliberate and clearly expressed opinion of the Editor of the Transylvania Journal, of one who is now a Professor in the same school with him. At that time it was scarcely possible to find epithets savage enough for him, and it was equally difficult to use sufficiently eulogistic phrases for the Professors who have since been visited with so large a share of the Editor's denunciatory powers. Just observe him now, leading the various characters of his drama upon the public forum—of Prof. Caldwell, in the above proceedings he speaks, as "an experienced, gifted, eloquent, learned and successful teacher of the Institutes of Medicine, and as an urbane, liberal, and high minded gentleman." Of Prof. Cooke, as "a teacher far in advance of the present age in the Theory and Practice of Medicine." Of Prof. Yandell, as "an enlightened, eloquent and impressive lecturer &c." His opinion of the other gentleman is tolerably explicitly given above, and now he comes forward to reverse all this solemn proceeding—Of the gentleman whom he abused so much, he now virtually says, "this individual by having written the pamphlet referred to, so disgraced himself in my estimation, that I tried to put a seal of public indignation and disgrace upon him—In regard to that book, he is still unannealed and unshriven, in my opinion, but I think him an ornament and pride to the Medical department of Transylvania, and that she has gained and improved in losing the distinguished men described above, and by putting *both of us* into her chairs." By what strange metamorphosis has the Editor managed to turn his mind

wrong side out on these matters? He speaks of Prof. Caldwell's want of "good faith" in his support of the Louisville school, and we should like to know whether there is an abundance of "good faith" in his present relations to the gentleman whom he pictured forth in the resolutions above? It will be time enough for him to preach sermons on "good faith," when he settles this matter satisfactorily to the public mind. For the present we forbear on this point—reserving several important matters for a future occasion.

These resolutions were scattered all over the country. The gentleman reported in favor of having them printed in all the Lexington papers—they were issued in extras, and all this denunciation was made, without giving the object of it a chance to appear and defend himself. Nor did his indignation stop there—he was mainly instrumental in having the author of the pamphlet expelled from the Medical Society, and now, the person who was esteemed worthy of almost all the opprobrious epithets that the English language furnishes, who was unfit to be a member of the Medical Society, is considered by the author of all this mischief, a pride and ornament to the school, and if any body dares to think, as he thought four years ago, he is up in high dudgeon, and tells them they have no regard for truth. But here is the issue of the matter—if the above charges against Dr. C. were true, then has "Transylvania precipitated herself from her proud elevation," by giving him a Professorship. This, be it remembered, is only a contingent opinion. If the charges were false, then has "Transylvania fallen with a ruinous crash" in elevating the author and publisher of the falsehoods, to a Professorship, and if the Professor can redeem Transylvania from the charge, by either horn of the dilemma, he is welcome to the glory that may accrue. We respectfully ask, what would be the effect of another indignation meeting?

But here is another matter requiring explanation. Can a satisfactory one be given? How is it that Transylvania has commenced elevating the venders of secret nostrums, to her Chairs? Formerly, she looked with contempt upon all the aiders and abettors of such things, but now she can make Professors of the salesmen of secret remedies. The gentleman, whose case we are considering, stands before the community in the quadruple relations of Physician, Editor of the Transylvania Journal of Medicine, Professor of Chemistry and Pharmacy, and as the appointed and accredited agent for the sale of a secret nostrum, known as the Compound Tomato Pill!! Quite a hetrogenous medley of honors! But where is the proof for this serious charge? Here is the advertisement of the general agent, published in all the Lexington papers for many weeks:

"The Tomato Medicine, a substitute for Calomel, is sold by George W. Norton, Lexington, Ky.; ROBERT PETER, M. D., of Lexington, Ky.; Withers and Lamme, Cynthiana; T. S. Barclay & Co., Paris; J. D. Thomas, Leesburg; A. M. Barnes, Mountsterling. Applications for agencies in Kentucky, Tennessee, the western part of Virginia and North Carolina, may be made to W. C. Bell, Gen. Agent. Lexington, Ky., May 23, 1838."

Here then, while the gentleman is engaged in vending this nostrum, in offering himself as a scientific Physician, and in editing a Medical Journal, the conservators of the fame of Transylvania take him by the hand, and install him in a Professorship, while the official document, exalting him to a *sub-agency* for the sale of Patent Tomato Pills, duly signed, sealed and delivered was probably lying snugly cornered in his pocket. But she has not precipitated herself from her proud elevation! Oh, no. Will the Professor be good enough to inform the public, whether he yet clings to this agency, or has he thrown it up? What is the average amount of the commissions arising from the sale of the Pills? Would not the school be materially improved in his estimation, by the establishment of a Tomato Professorship, provided he is

placed in it? And cannot he obtain a grant of the little strip of ground belonging to the Medical edifice, for the purpose of raising tomatoes, the fruit of which he can trade to Miles, for Pills, and thus turn an additional penny in that way? We make the suggestions very respectfully.

We make an appeal now to our medical brethren throughout the country—suppose an itinerant, medical graduate reaches Louisville on a pedling tour, with a little wagon filled with Brandreth's Pills, Evans' and Moffatt's Life Pills, Samuel Thompson's Patent steam system, and the Patent Compound Tomato Pill, having a full supply for the Western country. The Faculty of the Institute becoming acquainted with him, and finding him intelligent, thinking he may be made an useful instrument, propose to employ him in distributing pamphlets along the road, and as upon an emergency he can write a pretty fierce hand-bill, they propose to employ him for all these purposes. They therefore appoint him in due form, agent of the Louisville Medical Institute, start him off through the country, hear that he is zealously engaged for both science and quackery, and that his devotion is so great that it is a serious problem which of the duties most nearly concerns his heart, the sale of the pills or his lucubrations for science. About this time a vacancy occurs in the Institute, and the Faculty immediately proceed to have it filled by the election of their itinerant agent, and he is called back from the sale and agency of quack medicines, to enter upon the duties of a Professorship in the Institute. We leave the matter to medical men—they can decide whether the Institute would precipitate herself from a proud elevation by such a course.

Here we leave the matter for the present, and we hope forever. This depends upon the manner in which the Editor of the Transylvania Journal may conduct himself—as long as

he keeps himself within the proprieties of life, we shall be glad to let him alone, but he must cease dealing forth his uncalled-for denunciatory charges, as though he were the Jupiter Tonans of the Medical Olympus.

ANALECTA.

PATHOLOGY AND PRACTICE OF MEDICINE.

GRAVES'S CLINICAL LECTURES.

On bed sores in fever, and their treatment—Instances of fever spreading by contagion—Attacking a person whose mouth was affected by mercury—Observations on the use of tartar emetic in fever—An account of the manner in which it is usually employed—New views upon this subject—Practice first introduced by Dr. Graves of giving tartar emetic, combined with opium, in the advanced stages of fever—Successful cases—Treatment of fever with profuse sweating in the commencement—Mr. Cookson's case—Mr. Stephenson's case—Mr. Knott's case.

I beg leave to draw your attention to-day to some points connected with the treatment of fever. The number of fever cases we have had of late, is much greater than for some years; and to those who are anxious to acquire a knowledge of the phenomena and character of one of the most interesting and important of human maladies, our wards furnish at present very ample opportunities. I trust that every gentleman who listens to me will avail himself of such advantages, and not permit opportunities of acquiring valuable information to pass away unprofitably. It is my duty to speak of the particular modes of treatment adapted to fever cases, to inform you how each symptom may be most successfully combated, and to lay down rules for your guidance in each particular emergency; it will be your business to collect and arrange the detached materials, and form your general principles with respect to the management of this very im-

portant disease. It has never been my wish to speak generally of the nature or treatment of fever; time will not permit me, nor do I wish to encroach on the province of those who lecture on the practice of physic; my object is merely to note symptoms as they rise, to speak of their nature and treatment, to confine myself to detached observations, and, as far as lies in my power, to contribute facts to those who write or lecture on practical medicine.

A woman has been admitted lately, who had been laboring under fever for a considerable time before she came into the hospital. This poor creature seems to have been in very miserable circumstances during her illness; her bedding must have been totally neglected, and no attention paid to cleanliness, for on her admission, though nearly free from fever, she was covered with bed sores to a frightful extent. Almost every point which had been subjected to pressure had ulcerated, and the ulcers went on undermining the skin, and committing terrible devastation in the cellular substance. Cases like this require great care and unremitting attention, it is on the exercise of an active and untiring humanity that the cure will mainly depend. In the first place, you are to recollect that the efforts of the constitution towards the re-establishment of health are impeded by the irritation of the sores; sleep is prevented, and the patient kept in a state of continual suffering, while a constant drain from the system is kept up by the ulcerative discharge, adding to the amount of existing debility. Hence a pseudo-febrile state arises, characterised by quick pulse, restlessness, and want of sleep, somewhat akin to that which is produced by scrofulous irritation. The appearance, however, of general excitement of the system, should never prevent the physician from adopting every mode of strengthening the patient as much as possible. You will not succeed in removing this condition by an antiphlogistic regimen; the patient requires tonics and narcotics, with a nutritious but not stimulating diet. If you put him on a low regimen, and give anti-febrile medicines, you will do mischief; you will increase the existing debility, and add to the source of febrile excitement. Your practice should be to

prescribe a nutritious diet, wine, and the sulphate of quinine, and to treat the sores with stimulant applications. The local application which we found most beneficial in such cases, is one composed of two ounces of castor oil, and one of balsam of Peru, which is to be applied on pledgets of lint, and covered with a poultice of linseed meal two or three times a day. In addition to this, we direct the sores to be washed night and morning with a solution of chloride of soda, in the proportion of twenty or thirty drops of the saturated solution to an ounce of water. We also direct the patient to lie occasionally on her face, and enforce the strictest attention to cleanliness on the part of the nurse. Dr. Arnott's hydrostatic bed is an excellent adjuvant in the treatment of this disease, but unfortunately the one we have is at present out of order.

Such, then, is our mode of treatment. We order the patient nourishing, but not heating food; we give wine, regulating its quantity according to its effects on the system, and the liking of the patient; we prescribe small doses of the sulphate of quinine, and administer an opiate at night to allay irritability, and procure sleep. The local treatment consists in the use of stimulant and detergent applications, poultices, attention to cleanliness, and change of position.

With respect to the present epidemic fever, we have now seen so many instances of its direct communication from one point to another in our wards, that we are induced to believe it to be contagious. From the great number of applicants laboring under serious and threatening diseases, we are sometimes obliged to put into our fever wards, patients affected with local inflammations, accompanied by symptomatic inflammatory fever; several of these, while recovering, have been attacked with symptoms of the present epidemic. A man was admitted last week into the fever ward with violent pneumonia; the right lung was extensively hepatised, and, in addition to this, the pleura was found to be engorged over a large portion of its surface. The case was one of extreme distress, and the state of the patient apparently hopeless; however, by appropriate depletion, assisted by mercury and blisters, convalescence became established, and the pulmonary

symptoms were rapidly subsiding. His system was still under the influence of mercury, his fever had disappeared, his dyspnœa was relieved, his cough, and all the other symptoms, nearly gone, when he was suddenly attacked with fever, and that of the same character as prevailed among the patients in the same ward. This is, I believe, the sixth or seventh case, in which patients laboring under some other form of disease, have been seized with symptoms of the present epidemic, while lying in the same ward with fever patients. I have thought it necessary to make this observation, because you will find it asserted in medical works, and by physicians of considerable eminence, that in hospitals, fever does not spread from one patient to another, and that where it does appear among many individuals in the same house, its spread is chiefly favored by want of cleanliness and proper ventilation. This, however, we can state to be the fact, that fever will spread among patients in the same ward, independent of any thing connected with filth or foul air, for we have seen it occur in our wards, which I can assert are kept as clean, and as well ventilated, as any in the kingdom.

There is one circumstance connected with this case worthy of remark, with reference to the supposed anti-febrile properties of mercury. It has been stated that mercury exercises a prophylactic influence over the system, and several persons who have cultivated medicine with success, but particularly some army surgeons of high authority, have asserted that the use of mercury not only cures fever, but also secures against it. I am afraid that in this and other cases, mercury has more credit than it deserves. In speaking of cholera, on a former occasion, I have told you that I had seen persons under the influence of mercury take cholera and die of it; and here we find a man, whose mouth is still sore, in whom salivation had not ceased, getting an attack of fever at a time when he had just recovered from another disease. This shows that mercury is not to be looked upon as a prophylactic in cases of fever of a contagious nature. We cannot always cure or prevent fever with mercury; on the contrary, where fever of a particular kind is present, it prevents the constitution from

yielding to its influence. Thus, in a case of hectic fever, brought on by suppuration of the liver, it has been found impossible to bring the system under the influence of mercury.

I come now to speak of a matter of great importance in the treatment of fever—I allude to the indications for exhibiting, and the mode of giving, tartar emetic at different periods of the continued fever of this country. For some time, I have been in the habit of employing tartar emetic with very remarkable success at various periods of fever, but principally towards its termination. I am therefore anxious to lay before you a brief statement of my experience of this admirable remedy, and I shall take leave to illustrate this by a reference to several very remarkable cases in which its administration was followed by the most decided and satisfactory results.

You are all aware that tartar emetic has been long and justly valued by the profession for its manifold and energetic properties. Without referring to its importance in the treatment of pulmonary diseases, and almost every form of local inflammation, I may observe, with respect to our present subject, that tartar emetic in small portions, dissolved in a quantity of whey or water, has been for a considerable time a popular and successful remedy in the commencement of febrile symptoms. Whether it is by its action on the stomach and intestinal canal, or by producing diaphoresis, or by some peculiar influence on the nervous and circulating systems, that it produces its favorable effects, we cannot exactly say; but we know that it frequently succeeds in cutting short, or removing, febrile symptoms. All these matters are, however, sufficiently well known to every student, and require no comment.

In a preceding lecture, when speaking of the best means of procuring sleep in various forms of acute disease, I alluded to the peculiar narcotic power of the preparations of antimony, and dwelt on the benefits derived from a combination of antimonials with those medicines which are strictly termed narcotics. I told you in that lecture that the good effects of

tartar emetic in delirium tremens seem to be totally independent of its action on the stomach; for we had witnessed those effects when it had not excited either nausea or vomiting. I referred also to many instances of delirium tremens, in which opium in every form had failed in procuring sleep, and where a combination of tartar emetic and laudanum had succeeded in tranquilizing the patient, and producing sound, refreshing sleep. Bearing this important fact in mind, we shall proceed to an examination of the circumstances which require the use of tartar emetic in fever.

There is a peculiar stage in one form of fever, and that exceedingly dangerous and threatening, in which I have derived most signal benefit from the use of this remedy. A patient, suppose, gets an attack of fever, he has all the ordinary symptoms, as thirst, restlessness, heat of skin, quick pulse, and headache. You are called in about the third or fourth day, and find that he has all the symptoms I have mentioned still present; his face is flushed, his head aching, his pulse from 100 to 110, but not remarkably strong; you find, also, that he has been sweating profusely from the commencement of his illness, but without any proportionate relief to his symptoms, and that he is restless and watchful. You are informed that his perspirations are so great that his linen has to be changed frequently in the day, and that, notwithstanding this, the pulse has not come down, the headache is undiminished, and the patient has become more and more sleepless. Here comes a very important practical question, namely—How are you to treat such a case? The patient has no epigastric tenderness, no cough, no sign of local disease in either the thoracic or abdominal cavities; he has been purged, used diaphoretics, and perhaps mercurials; every attention has been paid to regimen, ventilation, and cleanliness; but still he lies there in a state of undiminished febrile excitement, with persistent headache, quickness of pulse, and sleeplessness.

In such a case as this you have nothing to expect from the sweating; it will never produce any relief. I was called some time back to see a young gentleman in fever, who was placed in similar circumstances to those which I have just detailed.

It was about the sixth day of his fever, and I found him with a pulse of about 110, with considerable restlessness and headache, and was informed that he had perspired profusely from the commencement of his illness. On hinting the necessity of more active treatment than that which had been employed, his physicians appealed to the perspirations as decidedly contra-indicating depletion. They said that the profuse sweating pointed out the impropriety of active measures, and that it was a symptom which would be speedily followed by relief. I was convinced that they had taken a wrong view of the case, and stated as my opinion that nothing was to be expected from the perspiration; that when co-existing with a persistent febrile condition of the system, when accompanied by quick pulse, headache, and restlessness, perspirations always indicated the necessity for antiphlogistic measures, and in particular for the use of the lancet. I instanced the case of patients laboring under arthritis with profuse perspirations not accompanied by relief, and said that it was well known that such cases were most successfully treated by a full bleeding from the arm. I accordingly stated, that although the disease was of five or six days' standing, and the pulse not very strong, I would advise immediate bleeding. Sixteen ounces of blood were therefore abstracted, with some relief to the patient, and without increasing his debility; and it was then a question what further steps were to be taken. The young gentleman had been actively purged; he had no cough or abdominal tenderness; his symptoms were headache, sweating, and sleeplessness; and to these, nervous agitation had now become superadded. I proposed here what surprised my colleagues very much, and this was, to give our patient large doses of tartar emetic. They said the practice was very strange, but consented to give it a trial, on laying before them the reasons which induced me to prescribe it. I said that in such cases the tartar emetic, forming as it were part of the antiphlogistic treatment which commenced with general bleeding, would have a tendency to cut short instead of increasing the perspiration, by reducing the inflammatory state of the system on which it depended. The reasoning seemed rather

paradoxical—nevertheless it turned out to be correct. I ordered the tartar emetic to be taken in the quantity and mode in which it is generally prescribed in acute pneumonia; that is to say, six grains of tartar emetic combined with a little mucilage and cinnamon water in an eight ounce mixture, to be taken in the course of twenty-four hours. After taking five or six grains, the sweating began to diminish; on the second day he scarcely perspired any, and his headache was greatly relieved; he began to improve rapidly in every respect, sleep returned, nervous agitation ceased, and convalescence became soon established.

The next case in which I employed tartar emetic with signal benefit was one of a very insidious character, as many of them are at present; they exhibit no prominent or alarming symptoms, and yet continue to run on day after day without any tendency to a crisis. The gentleman who was the subject of this case got an attack of fever unaccompanied by any remarkable peculiarity, except that he was very nervous, and alarmed about his situation. His fever went on day after day without any decided symptom; he had no distressing headache, no cough, little or no abdominal tenderness; there was no vomiting or diarrhœa; and his pulse was not much above the natural standard. He had been leeched over the stomach at the suggestion of some medical friends, but this was done rather by the way of precaution than for the purpose of combating any actual disease. About the eighth or ninth day the pulse began to rise; he complained of headache, and became restless and watchful. On the eleventh day the headache had greatly increased, he was in a state of great nervous excitement, and had not closed an eye for the two preceding days and nights. This state of insomnia and nervous agitation was immediately followed by violent paroxysms of delirium; his eyes, never closed in sleep, wandered from object to object with unmeaning restlessness; his limbs were in a state of constant jactitation, and he raved incessantly: his voice being occasionally loud and menacing, at other times low and muttering. His friends became exceedingly alarmed, and every remedy which art could suggest was tried:—his

head was shaved, and leeched until they could leech no longer; cold lotions were kept constantly applied with unremitting diligence, and he was purged freely and repeatedly. At this period, that is to say, about the eleventh day of the fever, I was requested by this gentleman's medical friends to visit him. On examining the patient, I found that he was constantly making violent efforts to rise from his bed, and that he had a great deal of the expression of countenance which belongs to a maniacal patient. Under these circumstances, I advised the use of large doses of tartar emetic, in the mode already detailed, except that, in this case, in consequence of the violence of the delirium, I ordered the quantity prescribed for a dose to be taken every hour instead of every second hour. The patient took about ten or twelve grains during the course of the night, and next day his delirium had almost completely subsided. Under the use of the remedy he became quite calm, fell into a sound sleep, and began to recover rapidly.

In the two preceding cases I was guided by ordinary principles, recognized by all physicians, and according to which the exhibition of tartar emetic is recommended in fever whenever there is undoubted evidence of determination of blood to the head, producing headache, loss of sleep, and delirium. In the cases which follow, tartar emetic was exhibited at a period of fever, and under circumstances that were, with respect to the exhibition of this remedy, not less novel than important. The principles which led me to this practice have long been established, but, nevertheless, the practice is entirely new, and (I say it with pride, for it has already been the means of saving many valuable lives) it is entirely my own.

Shortly after the commencement of our present session, Mr. Cookson, a pupil at this hospital, and remarkable for his diligent attention to clinical pursuits, caught fever while attending our wards, in which many cases of the present epidemic were then under treatment. His fever was of an insidious nature, not characterised by any prominent symptom, not exhibiting any local disease to combat, or any tendency

to crisis. For the first seven or eight days, with the exception of headache, which was much relieved by leeching, he seemed to be going on very well; his skin was not remarkably hot; he had no great thirst, nausea, or abdominal tenderness; his pulse was only 85; and he had sweating, which was followed by some relief. About the eighth or ninth day the pulse rose, and he began to exhibit symptoms of an hysteric character. Now in every case of fever, where symptoms resembling those of hysteria come on, you should be apprehensive of danger. I do not recollect having ever met with a single case of this kind which did not terminate in nervous symptoms of the most formidable nature. I prescribed at the time the usual antihysteric medicines, but without any hope of doing good, knowing that these symptoms were only precursory to something worse. I also, as a precautionary measure, had leeches applied to his head. The fever went on, the headache became more intense, he grew nervous and sleepless, and fell into a state of great debility. On the fourteenth day of fever his tongue was black and parched, his belly tympanitic; he was passing every thing under him unconciously; he had been raving for the last four days, constantly attempting to get out of bed, and had not slept a single hour for five days and nights. Dr. Stokes, with his usual kindness, gave me the benefit of his advice and assistance at this stage of Mr. Cookson's illness, and we tried every remedy which experience could suggest. Blisters were applied to the nape of the neck, the head was kept cool by refrigerant lotions, the state of the belly attended to, and, as we perceived that the absence of sleep was a most prominent and distressing symptom, we were induced to venture on the cautious use of opium. It was first given in the form of hydrarg. c. creta, with Dover's powder, with the view of relieving the abdominal symptoms as well as procuring sleep. This failing in producing the desired effect, we gave opium in the form of enema, knowing its great power in the delirium which follows wounds and other injuries. This was equally unsuccessful with the former. He still was perfectly sleepless. We came again in the evening, and as a last re-

source, prescribed a full dose of black drop, and left him with the conviction that if this failed he had no chance of life. On visiting him next morning at an early hour, we were highly mortified to find that our prescription had been completely unsuccessful; he had been more restless and delirious than ever. Here was the state in which we found him on entering his chamber at eight o'clock in the morning of the fifteenth day of his fever. He had universal tremors and subsultus tendinum, his eye was suffused and restless, he had been lying for some days entirely on his back, his tongue was dry and black, his belly tympanitic, his pulse 140, quick and thready, his delirium was chiefly exhibited in short broken sentences and in a subdued tone of voice; and it was now eight days and nights since he had slept. Here arose a question of great practical importance. How was the nervous agitation to be calmed and sleep produced? Blisters to the nape of the neck, cold applications, and purgatives, had failed; opium in various forms had been tried without the slightest benefit; if sleep were not speedily obtained he was lost. At this emergency a mode of giving opium occurred to me which I had never thought of before. Recollect what his symptoms were at this period; quick, failing pulse, black, dry, tremulous tongue, great tympanitis, excessive prostration of strength, subsultus tendinum, extreme nervous agitation, constant muttering, low delirium, and total sleeplessness. I said to Dr. Stokes that I wished to try what effects might result from a combination of tartar emetic and opium; I mentioned that I had given it in cases of delirium tremens with remarkble success, and thought it worthy of trial under the circumstances then present. Dr. Stokes stated in reply, that he knew nothing with respect to such a combination as adapted to the case in question, that he had no experience to guide him, but that he would yield to my suggestion. We therefore prescribed a combination of tartar emetic and laudanum in the following form, which is that in which I generally employ the remedies in the treatment of delirium tremens. ℞. Antimonii tartarizati grana quatuor, tinct. opii. drachmam, misturæ camphoræ, ℥ viij. Of this mixture, a tablespoonful

to be taken every second hour. The success of this was almost magical. It is true that it vomited him; after taking the second dose he threw up a large quantity of bile, but it did him no harm. After the third or fourth dose he fell asleep, and awoke calm and refreshed; he began to improve rapidly, and soon recovered.

The next case to which I shall direct your attention is that of Mr. Stephenson, a pupil of Mr. Parr of this hospital. This young gentleman, as many of you will recollect, was attacked with fever about the middle of January. On Thursday evening he complained of languor and malaise, and on the following day felt himself feverish, but without any prominent or decided symptom. At night he took a dose of calomel and antimonial powder, which had no sensible effect, and the following day complained of shivering, violent headache, pain in the back, thirst, prostration of strength, and sleeplessness. He was ordered to take a combination of tartar emetic and nitrate of potash in camphor mixture, which produced a few loose stools and some diaphoresis; but in consequence of its effect on the stomach, and his complaining much of thirst and epigastric tenderness, the tartar emetic was omitted, and effervescing draughts prescribed. Two days afterwards, the epigastric tenderness still continuing, twelve leeches were applied over the pit of the stomach, followed by blister, which gave relief, and the bowels were kept open by enemata. He commenced a second time the use of the tartar emetic and nitrate of potash, with the addition of five drops of tincture of opium to each dose, but was obliged to give it up again in consequence of the increase in his gastric symptoms. He now became exceedingly restless, and his delirium began to assume a very intense character. Leeches were applied behind the ears, his head shaved, and his temples blistered; he had also a large blister over the abdomen, which gave him considerable relief, but the cerebral and nervous symptoms became much worse. The delirium went on increasing, accompanied by subsultus tendinum, and picking the bedclothes; he was perfectly sleepless; raved incessantly, and had to be kept down in bed by force. On the 17th day of his

fever he was in the following condition,—tongue brown and rather dry, no remarkable thirst or abdominal tenderness, eyes red and ferrety, no sleep for five nights, constant muttering and delirium, (which had now assumed the character of delirium tremens,) subsultus tendinum and jactitation extreme, urine and fæces passed under him unconsciously. I directed the combination of tartar emetic and laudanum to be immediately given, carefully watching its effects. He had only taken two doses when a degree of calmness set in, bringing with it relief to all his symptoms, and before a third dose could be administered, he fell into a profound sleep, from which he awoke rational and refreshed. The mixture was continued every four hours with increasing benefit, he slept long and soundly, and began to improve in every respect. On the second day after he had begun to use the tartar emetic, he took a little porter, which was changed the next day for claret and chicken broth. In about a week he was able to sit up in bed, and seven days afterwards was able to leave the hospital and go to the country for change of air.

The last case to which I shall direct your attention is that of Mr. Knott, also a pupil of this hospital, a gentleman remarkable for his unremitting attention to clinical pursuits, and from whom I derived much valuable assistance in conducting various post-mortem examinations. This gentleman was attacked with fever about the latter part of January, which went on for some time without any particular symptom, except considerable restlessness and nervous excitement. He then became perfectly sleepless, complained of violent headache and thirst, raved, and became exceedingly irritable. Opium in various forms and repeated doses, either alone, or combined with musk and camphor, totally failed in producing sleep, and his condition became daily worse. On the 13th day he was in a very dangerous condition; his nervous agitation had risen to an alarming height, and for many days and nights he had never closed an eye. At this period it appeared obvious that if something were not done to calm nervous excitement and restore sleep, he had but little chance of life. Under these circumstances I proposed to my friend, Dr.

M'Adam, who attended with me, to give tartar emetic and opium. After he had taken about three tablespoonfuls, he had a copious bilious evacuation, and immediately afterwards fell into a sound sleep, during which he perspired profusely, and awoke in about twelve hours, with every bad symptom gone. The nervous irritability was completely allayed; his tongue moist and cleaning; his thirst and headache relieved; and his reason quite restored. From that period every thing went on favorably, and he rapidly gained his health and strength.

Since the foregoing lecture was delivered, I have met with several cases of fever, in which I employed the tartar emetic and opium with the same remarkable success. A man named Christopher Nowland was admitted into Sir P. Dun's Hospital, on the 3d of February last, laboring under fever. He had been ill ten days, had raving, subsultus tendinum, and appeared unable or unwilling to answer questions. His wife stated that he had diarrhœa for the preceding three days, and that he dozed occasionally, but never slept. He appeared exceedingly low and prostrated, and lay constantly on his back. A succession of flying blisters were ordered to be applied to the chest and stomach, and wine and chicken broth prescribed. He also got the following draught every third hour:—

℞. Mist. camphoræ, ℥ j.
Spirit. ætheris oleosi, ℥ ss.
Spirit. ammoniæ aromaticæ, ℥ ss.
Moschi, gr. viij.—Misce.

Under the use of these remedies he began to recover from his prostration; but as the sleeplessness and delirium still continued, I ordered him to take the tartar emetic mixture in the usual way. It produced at first two or three full discharges from the bowels, and after he had taken the fourth dose he fell into a sound sleep, from which he awoke much better, and soon became convalescent.

In the case of a patient named Michael Murray, who exhibited the same remarkable nervous irritability and sleeplessness, this remedy was also employed with very striking effects. This man had been ill of fever for ten days before his admission into Sir Patrick Dun's Hospital, and appeared so

much prostrated that I ordered him arrowroot with beer. He raved a little on the night of his admission, and remained without closing an eye until morning. The same symptoms were observed on the following day, and his nervous irritability became increased. On the 14th of February, he had been five days in the hospital, and had not enjoyed a single hour's sleep. I ordered the tartar emetic mixture to be given: three doses produced sleep: he had no other bad symptoms, and recovered completely.

In another very bad case of maculated fever, the same results were obtained. The patient, Mary Farmin had got an attack of fever after a fright. She had been eight days ill at the date of her admission, February 25th. She had irregular pulse, sleeplessness, headache, and suffusion of the eyes; moaned and sighed continually, and appeared greatly prostrated. She was blistered, had fetid enemata, and took the chloride of soda internally with some benefit; but the sleeplessness and nervous excitement continued. In this case, though the tartar emetic was not followed by speedy convalescence, still it produced remarkably good effects; after taking four doses of it she fell asleep, and did not awake until next morning.

There are many other cases which I could adduce to prove the value of a combination of tartar emetic and opium in the nervous sleeplessness of low fever; the foregoing however, I trust will be found sufficient.

I forgot to observe, that all the cases I have spoken of as successfully treated by means of tartar emetic combined with opium, in the advanced stage of the disease, were cases of maculated or spotted fever. I shall take a future opportunity of entering more fully into a detail of its symptoms.

I. *On the Infusion of Digitalis in Delirium Tremens.* By Dr. Magnus Huss, of Stockholm.

The infusion, prepared with a drachm of the leaves to a pint of water, was administered in six cases, all of them men of strong constitution, of from twenty-four to thirty-three years of age. Two of the cases required bloodletting. In three, a tablespoonful of the infusion was administered every hour throughout the day only; in the other, a like quantity was exhibited every hour both day and night. In the former number, the disease yielded, and sleep ensued on the third day; in the latter number, sleep ensued in thirty-six hours; an equal quantity of the infusion was thus required in both cases. The patients awoke after a sleep of from six to ten hours, free from the disease, but laboring more or less under the effects of the medicine. In one patient the pulse had sunk to thirty-five beats, but in the other the rhythm was normal; in the whole number the pupils were contracted, and they complained of dryness of the mouth, burning in the throat, humming in the ears, heaviness in the head, great weakness, and nausea; which last symptom was so severe in one patient that for two days he vomited whatever he took.—*Jahrbucher der Gesammten Med.* B. xv. H. 1.

II. *On the proper Dose of Opium in Delirium Tremens.* By Dr. Weisse.

A case of Delirium Tremens, in which one grain of opium, taken every hour up to fourteen doses, failed in effecting a cure, but removed the delirium. The friends became alarmed by observing that the patient squinted incessantly, saw double, and that the face became horribly distorted. These symptoms were attributed by Dr. Weisse to the opium producing too little effect; he accordingly ordered two-grain doses every two hours. After the second dose the patient slept soundly, and awoke quite well. Dr. W. observes, that when a patient laboring under Delirium Tremens is under the influence of opium, and his mind, instead of picturing to him men and

devils, begins to busy itself with *insects*, he is about to fall asleep.—*Zeitschrift f. d. Gesammte Med.* B. v. H. 2. *Hamburg, June*, 1837.

On the Use of Tartar Emetic and Opium in Spasmodic Affections. By R. G. Ackerley, Esq., Surgeon, Liverpool.

The author deprecates, and with much propriety, the habitual employment by practitioners, of that class of remedies usually called anti-spasmodics, but which are in fact powerful stimulants, in cases of spasm. Mr. A. thinks that we should rather look to remedies "possessing power of relieving the excited state of the brain and nervous system, and thus allaying the tonic muscular contractions which characterize this class of diseases." He fulfils his indication as follows:

"The remedy which I propose, (and it is one which I have used with the greatest success for the last three years,) is the tartar emetic, in combination with opium in some of its forms. The sedative effects of the opium are powerfully increased by uniting with it the antimonial salt, while its narcotic properties are diminished. The manner in which I prescribe it is the following:—Three or four grains of tartar emetic, with two drachms of laudanum, or one of Battley's sedative liquor of opium, and two ounces of water. A teaspoonful of this mixture to be given every fifteen minutes, until relief is obtained, and afterwards every hour, until all symptoms of the affection have disappeared. Its first effect is generally to produce nausea, or even vomiting. The latter I encourage, where, as is frequently the case, I have every reason to suspect that the spasm proceeds from improper or undigestod food in the stomach, acting as a source of irritation. After this, the medicine is generally retained; *tolerance*, as Rasori describes it, being established, and the spasms speedily subside. It may be given in spasm of the stomach,

diaphragm, spasmodic asthma, and during the paroxysm of hysteria, with the most beneficial results. I have administered it in such cases in the advanced stage of pregnancy; nor do I consider an irritable state of the stomach, with vomiting, any objection to the use of it, the sickness generally subsiding after the second or third dose. Should the symptoms be very urgent, if the case will in other respects allow of it, I do not hesitate to bleed, as a most powerful auxiliary; but phlebotomy may in general be dispensed with. Enemata are also at times beneficial, particularly where the attack is accompanied by constipation, though the tartar emetic sometimes produces evacuations from the bowels, and renders their administration unnecessary."

Med. Gazette. Oct. 7, 1837.

On the Use of Colchicum in Scarlatina. By Wm. Tait, Esq., Surgeon.

In our last volume (p. p. 249, 565,) we gave an account of the employment of this remedy by Dr. Lewin in fever. Mr. Tait here informs us, that he had employed it in scarlatina, without any knowledge of Dr. Lewin's practice.

"I administered it only to thirty-five patients, being little more than one-fourth of those for which I prescribed; but these, of course, were of the worst description, being all of the pure inflammatory type. In the most of these, bloodletting, both general and local, was had recourse to; in others, local bleeding only; and I may here remark, that the effects of the colchicum were always most apparent after detraction of blood; but in all, the following changes were more or less manifested in a short time after its administration. The pulse was diminished in frequency and force; the palpitation of the heart, which in young subjects was often perceptible to the eye, subsided; the inflammation and pain of the throat

were alleviated; and the patient often expressed himself "much better." Vomiting was excited in a few cases; but, as this seemed always to be followed by an improvement in the state of the tonsils, and generally abated after the rejection of a quantity of bile, it was never found necessary to interrupt the use of the medicine. The bowels were generally more or less purged, and the improvement was always so sudden and marked, after a free discharge of dark bilious stools, that I always considered my patient out of danger the moment they appeared. In some cases, where bloodletting was not premised, these effects were not so easily produced; two days having elapsed in one case before any change was observable.

"When called to a case of inflammatory scarlatina, it was invariably my practice after administering a purgative, and bleeding from the arm, or locally by leeches, (as circumstances might require,) to begin with the Vinum Colchici, and continue it till all the inflammatory symptoms were subdued; a blister round the throat being all that was necessary to complete the cure. Almost the only gargle used was a little warm water, and the occasional inhalation of vapor; and with this, and the treatment above detailed, I have the utmost satisfaction in saying that I never saw a tonsil or any part of the mouth ulcerated. The dose of the Vinum Colchici was considerably below that administered by Dr. Lewin, and differed according to the age and strength of the patient. In no case did it exceed twelve or fifteen drops every three or four hours, in a little water, sweetened with syrup, and this only in strong, robust farm-servants: for children of four or six years, I began with three or four drops, and decreased the dose, watching its effects, and stopped whenever these were manifested."

Mr. Tait describes his success as singularly great, both actually and comparatively with that of his brother practitioners in the same epidemic. He only lost one patient out of 126, he says; while others lost one in five or six. We cannot believe that so great a difference as this could result from any difference of treatment.—*Lancet. Nov.* 4, 1837.

ANATOMY AND PHYSIOLOGY.

The study of the nervous system has received so large a share of attention, within the last few years; the new views, which have been thus elicited, are destined to modify so materially the whole face of Physiology and Pathology, that, we consider, we cannot devote a portion of the space, allotted to Analecta in our Journal, more profitably to our readers, than in making them acquainted with the results of some of the most recent researches on this interesting subject. We, therefore, introduce to them the following very full analysis of the work of Mr. Grainger on the "Structure and Functions of the Spinal Cord," from the Medico-Chirurgical Review, omitting a part of the introductory observations of the reviewer.—*Eds. of the Lou. Jour. Med. and Surgery.*

It would be idle in us insisting on the importance of anatomical study. When medicine was more empirical and less scientific than it now is, when its anatomical basis was little understood, then the anatomist was looked on as a sort of scholiast, neither adapted for, nor conversant with, the practical offices of the profession. But so soon as surgery became a science, and the investigation of the tissues gave the breath of generalization to the previous observations of the empirical physicians, it began to be less and less an axiom, that attention to anatomy was a source of disqualification for practice.

At the present day, it will be found that the best physicians and surgeons have either been engaged in teaching anatomy, or have paid considerable attention to it. The old race of empirical routinists is fast dying away, and the young men who are rising into notoriety are honorably distinguished by their sound scientific education.

Anatomy, however, is an eminently progressive science. Being one of facts, it is capable of accumulative advancement, for a single unit added to any number of units makes that

one the more. But it is not simply from the addition of a few fresh facts that Human Anatomy is progressive; it is from the application of the analogical method to it. Comparative anatomy, and, consequently, comparative physiology, remained nearly stationary from the time of Aristotle down to that of Daubenton. Cuvier generalized, Hunter reasoned, and Blumenbach, and the St. Hilaires, and Carus, and a host of others, dissected, compared, and systematized. The results of their labors are now beginning to appear. General physiology is rearing its head as one of the most noble, most philosophical, and most delightful branches of human knowledge, and, while it is highly beautiful in itself, it is doing that for human physiology which general anatomy had already done for human anatomy—it is merging special facts into general laws, and shewing that even what appeared exceptions are fragments of general laws themselves.

I. *On the Structure and Functions of the Spinal Cord.*

The objects of Mr. Grainger can hardly be explained so well as in the words of his own preface. And that explanation is necessary to the reader, who wishes to comprehend the objects of the author.

"In the present treatise," he says, "an attempt is made to obtain some definite information, respecting a subject of the highest physiological import,—the true seat of sensation. A reference to the established doctrines is sufficient to convince every person whose judgment is not biased by theories, as fallacious as they are universal, that our knowledge of the properties possessed by the nervous system, is not only inadequate satisfactorily to elucidate any one function of the animal economy: but, is in more than one respect, *absolutely opposed to the dictates of common sense.* In contemplating the operations of the inorganic world, nothing is perceived but harmony, regularity, and exactness; whilst, if we regard the phenomena of nature, in the animal and vegetable kingdoms, as they are now interpreted, we discern only confusion and uncertainty.

The total insufficiency of the principles of physiology, as they are at present taught, is universally acknowledged; and a strong and daily increasing conviction has arisen, that the time is not far distant, when the scattered facts with which this science abounds, will be shown to depend on a few simple and general laws. The magnificent discoveries of comparative and developmental anatomy, by demonstrating the wonderful uniformity which prevails in the construction of animal bodies, plainly evince that such an anticipation is not visionary; for it would be an unparalleled anomaly in the laws of creation, if such unity of organization as is displayed, not only in the nervous, osseous, glandular, and other systems, but in the formation of the entire frame, were not accompanied by a corresponding simplicity in the laws which regulate the action of this perfect machinery.

An extended and careful examination of the reflex power of the spinal cord, discovered by Dr. Marshall Hall and professor Muller, has induced me to believe that it is only a part of a great principle, connected with the nervous system; from the application of which, in the investigation of all those motions which have their source in contractility, the most valuable results may be anticipated, both in the animal and vegetable kingdoms. The laws by which this important power is regulated, are as simple and exact as those of gravity itself; and it is this circumstance, more especially, which seems to indicate the existence of an universal principle in the movements of organized bodies.

One of my principal objects has been to detect the anatomy by which the reflex power operates; and, although this branch of the inquiry needs much further prosecution, I am, myself, convinced that a peculiar order of nerves, called the excito-motory, not only exist in the cerebro-spinal, but, likewise, in the ganglionic system. The contractile power possessed by plants, has induced many anatomists to conclude that those bodies are provided with some kind of nervous system; and, if it should be proved, hereafter, that the vessels and tubes of vegetables do act in obedience to the reflex principle, it is certain that they must be furnished with organs which, how-

ever much they may be modified in their physical characters, correspond in office with the excito-motory system of animals.

It may, perhaps, be thought, that more importance is attached to the anatomy connected with this principle than it deserves; but although no one is more willing than myself to acknowledge the profound spirit of physiology, which enabled Dr. Hall, unaided by the scalpel, to penetrate the veil which has so long obscured the operations of the nervous system; yet it cannot escape the recollection how many theories, none, perhaps, so important, but bearing equally with this the semblance of probability, have ultimately been classed in the number of ingenious but unfounded speculations. Such being the lesson that experience has taught us, it is, perhaps, not too much to assert, that if the physiologist be anxious to establish, by the results of his enquiries, a great principle of the animal economy, he must be satisfied previously to submit his conclusions to the test of anatomy."

It may perhaps be considered a strong mode of expressing himself, when Mr. Grainger tells us that our common physiological opinions are absolutely opposed to the dictates of common sense. But we shall see presently, whether that case is established.

The work itself consists of seven chapters and an appendix. The first chapter contains—A Brief Review of the Opinions which have been entertained, relative to the Functions of the Spinal Cord;—the second chapter—The Properties of the Grey and Fibrous Substances;—the third chapter—Anatomy of the Spinal Cord and Nerves;—the fourth chapter—Physiology of the Spinal Cord;—the fifth chapter—General Results;—the sixth chapter—Theory of the Functions of the Sympathetic Nerve;—and the seventh—Theory of Muscular Action.

I. *A brief Review of the Opinions which have been entertained, relative to the Functions of the Spinal Cord.*

We may readily admit that, great as have been the modern discoveries of Bell, Mayo, Magendie, and others, in reference

to the functions of the nervous system, those functions are still imperfectly understood, and that our ideas of it are vague in many instances, and contradictory in some.

The questions that more especially affect us at present are the following:—

1. What is the seat of sensation and volition?

2. What are the powers and attributes of the spinal cord?

3. Is there any mechanism by which those properties of the spinal cord and medulla oblongata, which have been more particularly explained by Dr. Hall, and are now known as the "excito-motory," are effected?

1. The opinions on the precise seat of sensation and volition are unsatisfactory and conflicting. Some have attributed these faculties to the spinal cord—the majority have placed them in the medulla oblongata—some have considered them the property of the cerebral hemispheres. Much of the confusion has resulted from not distinguishing with accuracy the "excito-motory" actions. Mr. Grainger's sentiments are expressed in a passage which proclaims him one of the class of physiologists who regard the cerebral hemispheres as the sole depositories of these importan properties.

"All these details sufficiently prove that the opinions which prevail respecting the seat of sensation and volition, are any thing but satisfactory. Although it is with great diffidence that I venture to disagree from so many high authorities, yet, I cannot refrain from expressing my conviction that those physiologists who contend that sensation and volition are properties either of the spinal cord in general, or of that part of it more particularly which is placed in the cranium, are equally in error. I believe it is susceptible of proof, although this has not yet been satisfactorily accomplished, that the brain is the sole organ of sensation and volition; and that the spinal cord is only connected with the production of true voluntary motion, in consequence of one part of its structure serving as the conductor of the volitions of the cerebrum."—11.

2. Setting aside the possession of sensation and volition,

of which we have at present, deprived the spinal cord, it is universally admitted to serve as the conductor of these faculties, and it is now generally admitted also, to possess with its nerves the "excito-motory" function.

"It is certain," observes Mr. Grainger, "that the spinal cord has a most important and immediate connexion, with the arteries of the muscles which are called voluntary; that it enjoys a power of exciting these to contract independently of the brain; and that it is this circumstance which has been the cause of all the conflicting opinions and evidence, which have been advanced on this subject. The discovery by Dr. M. Hall and professor Muller, of the real nature of the reflex function of the spinal cord, appears to afford a clue to the whole of this mystery; and when developed to its full extent, is probably capable of explaining most, if not all, of those anomalies which so seriously obstruct the successful cultivation of the physiology of the nervous system.

It was reserved for Dr. M. Hall to penetrate the mystery which had baffled all other physiologists; and to prove, not only that the phenomena which result from the reflex action of the spinal cord are essentially distinct from sensation and volition; but, likewise, to perceive, what had never before been surmised, the necessity of an independent division of the nervous system, equally distinct from the great sympathetic and the true cerebral system, by the agency of which, these peculiar phenomena are accomplished. Until these important distinctions were announced, no physiologist could explain how those motions, which are usually termed involuntary, but which must now be called excited, could take place in muscles of a voluntary character. How, for example, the actions of the diaphragm, which are susceptible of being suspended and otherwise controlled by the will, continue nevertheless during sleep, in coma, in the anencephalous infant, and in animals experimentally deprived of the brain: how the muscles of the face, which are so immediately under the influence of volition, become excited, together with a multitude of other muscles, in sneezing: how the muscles of the throat, which in speaking and singing are so obedient to

the mental impulse, are placed beyond its control in swallowing, coughing, and vomiting: or, in fine, how the muscles of volition can be excited to contract by impressions made on the sentient surface of the skin, when all volition and sensation are destroyed by the section of the spinal cord. These, and a multitude of other apparently conflicting phenomena of the nervous system, may be all readily solved according to the views of Dr. M. Hall."—13.

We need not go into the hypothesis of Dr. Hall, having lately devoted an article to its exposition. But this we will say. We were at first inclined to think Dr. Hall's opinions fanciful, and to constitute no great improvement on previous knowledge. But time and reflection, and the development on Dr. Hall's part of his own views, have led us to attach a much higher degree of merit and importance to them. We have observed, at the same time, with little surprise but with ess satisfaction, the attempts of several persons to foist on the public some obscure hints, and some mystical conjectures as complete anticipations of the elaborate generalizations of Dr. Hall. This is equally unjust and foolish, and will injure that gentleman as little as it will benefit those who advance such claims.

3. In answer to the third question, we may observe that, hitherto, no mechanism has been discovered, for the express performance of the duties of the excito-motory system. But it is Mr. Grainger's object to ascertain whether any such mechanism exists.

On the whole, we may sum up, in the words of Mr. Grainger, that notwithstanding certain difficulties and anomalies that never have been explained, the prevailing opinion has been, and still continues to be, that sensation and volition are properties of the medulla oblongata, and consequently that they remain after the loss of the brain.

It is further evident, that many writers suppose the spinal cord also to be more or less connected with sensation, and especially with the production of voluntary motion. But although these doctrines are so generally received, there are few physiologists, who do not perceive that they are utterly

insufficient to explain the phenomena of the nervous system, and that they are daily contradicted by the effects of disease.

II. *Properties of the Grey and Fibrous Substances.*

Of course it is a great object to ascertain the precise properties of the grey and fibrous substances found in the central organs of the nervous system. But the inquiry is attended with difficulty, and our knowledge will be found to be rather inferential and analogical than direct and satisfactory.

1. To Gall and Spurzheim are due the merits of having called public attention to the anatomy of the nervous system, and of having originated the great discoveries of our days which hinge essentially upon that anatomy.

Gall and Spurzheim contended that the grey matter secretes or forms the white fibres, and that this is its principal office.

This opinion is contradicted—first, by the observation of Tiedemann, that the fibrous matter appears before the grey; secondly, by the fact, that the material of the nervous system is derived from the plastic substance, or blastema of the embryo; thirdly, by all analogy.

2. The doctrine most commonly received at the present day considers the fibres of the white matter as subordinate to the grey.

The main reasonings on which this opinion is founded are the following:—1. The importance of an organ in the economy is dependent on and may be measured by the quantity of blood that it receives. Now the grey nervous matter is demonstrably much more vascular than the white. 2. The grey matter is found to increase in quantity in the ratio of the nervous energy. The observations of Mr. Grainger upon this head put the case so well, and are so adequate for the purpose, that we cannot do better than transcribe them.

"A second circumstance bearing upon the present question is, that *the grey matter increases in quantity in the exact ratio of the nervous energy.* We learn from a comparative examination of the brain, that the intellectual operations

become diversified and energetic in proportion as the grey substance is accumulated; and it is in this respect especially, more than in that of relative volume, that the brains of the lower animals differ when compared with each other, or with the human cerebrum, the great peculiarity of which consists of the very large proportion of its grey matter, when contrasted with the nerves attached to its base. A very accurate test of the intelligence possessed by different animals, and even by different individuals of the human species,* is thus afforded by the development of the convolutions, or, in other words, of the grey substance; for the so-called convolutions of the brain are only another illustration of that principle so beautifully displayed in the formation of the glands; according to which the largest possible quantity of materials is contained in the smallest possible space.

But the condition of the cerebro-spinal axis, at the time of birth, affords, perhaps, the most satisfactory evidence on this point. At that period, the grey matter of the cerebrum is well known to be very defective, so much so, indeed, that the convolutions are as it were in the first stage of their formation, being only marked out by superficial fissures, almost confined to the surface of the brain: whilst at this identical period, the spinal cord, owing to the imperfect development of its fibrous part, (which, as will be subsequently shown, is allied with the exercise of sensation and volition,) contains a larger quantity proportionally, of grey matter than it does in the adult; in consequence of which, according to the remark of Professor Arnold, that matter, which in the adult is placed so deeply in the interior, approaches much nearer to the external surface.

*"In advancing this opinion, which has been supported by so many distinguished physiologists, I beg to express my dissent from the conclusion attempted to be drawn from it by some writers, that such a theory displays the character of materialism. The merits of that long-disputed question are not touched by the observations offered in the text; for they merely relate to the material instrument by which the nervous power, whatever it may be, operates. Even the inquiry respecting the character of that power, which I consider to be a most legitimate subject of physiological inquiry, has nothing to do with the nature of the soul; the two questions are essentially distinct from each other, and as such they ought to be treated."

Now at this particular time, the true cerebral functions, consisting of the intellectual faculties, sensation and volition, are almost entirely, if not for a brief period totally wanting; whilst the true spinal functions are in full activity. It is impossible to adduce any more striking proof than this, to demonstrate that the extent of the power inherent in the nervous system, depends on the quantity of the grey matter.

Professor Tiedemann, in his valuable work on the development of the brain, has incidentally mentioned a fact which bears on this inquiry: he has found that in the torpedo, there is a mass of grey substance placed in connexion with the fifth and eighth nerves supplying the electrical organs, larger in size than the cerebellum itself, whilst in the common skaite no such mass exists. An exactly analogous fact is furnished by the comparative anatomy of the lobe of the olfactory nerve; for, in animals distinguished by acuteness of their smell, that body is remarkably large when contrasted with those in which that sense is less perfect. The object of such formations cannot be mistaken; it is evidently to generate power.

Lastly, it may be mentioned in corroboration of the opinion here advanced, that the grey matter is only met with in those parts of the nervous system which are known to be the seat of power; that is to say, in the encephalon, the spinal cord, and the ganglions; it is wanting, notwithstanding the assertion of Monro to the contrary, in those parts—namely, the nerves—which are proved not to have the capability of originating power."—21.

3. On a careful consideration of the preceding facts, and of the conclusions towards which they point, it will appear that the most important offices of the nervous system are in all probability performed by the grey matter. If these be so, the part played by the white must be subordinate. Conduction of the nervous power is seemingly its office. In the nerves such conduction is evident enough, as well as the incapability of originating power. In the brain the proof of this becomes more difficult, the white fibres and grey substance being so inseparably mingled. But the dissections of the hardened brain corroborate, to a great extent, the suggestions

of analogy, and point out, in apparently a satisfactory manner, fibres of sensation and volition proceeding from the spinal cord, transverse and longitudinal commissural fibres, and peripheral fibres uniting the individual convolutions. Microscopical researches would seem to discover "*varicose fibres*;" peculiar to the white substance of the cerebrum; but the microscope has played us false in anatomy too often to challenge much respect from us. We may conclude then that, in the present state of our knowledge, it is most reasonable to believe that the phenomena exhibited by the cerebro-spinal system are dependent on the grey matter, and that the white is the medium of conduction. Whether this is the whole truth, it would be folly to affect to determine.

III. *Anatomy of the Spinal Cord and Nerves.*

It is not necessary to enter fully into the contents of this chapter. Many of the facts alluded to in it are more or less familiarly known; and we shall principally confine ourselves to what appear to be novel statements on the part of Mr. Grainger.

1. The *grey matter* of the cord consists of two crescentic portions, one in each lateral segment of the cord, so disposed that the concavity of either crescent looks outwards. These two portions are invariably connected by an intermediate band of grey matter, which stretches across the median plane, just behind the bottom of the anterior median fissure of the cord. Thus, the two sides of the cord are in communication with each other.

2. By a longitudinal section, it is seen that the grey matter passes continuously from below upwards. Although it varies much in color, and is more or less intermixed with fibrous substance, it may be observed to pass continuously through the medulla oblongata, the pons Varolii, the optic thalami, and the striated bodies, on the outer border of which it is known to cease; never in this direction becoming continuous with the grey matter of the convolutions. The grey matter of the crus cerebri towards the inner side, is also

joined with that of the pons Tarini, tuber cinereum, locus perforatus anticus, and thus with the neighboring convolutions of the anterior and middle lobes of the brain. Although there is no direct junction between the grey matter of the cord and that of the optic tubercles, yet as these bodies are united with the optic thalami by grey substance, they are thus also brought into connexion with the cord itself. In the same way as the influence of an impression is transmitted from one side of the cord to the other, by the transverse process of grey matter, it is probable that by these connexions in a longitudinal direction, impressions, if sufficiently intense, are so transmitted that all the muscles may be stimulated, as happens in violent coughing and sneezing, and even probably in traumatic tetanus, from the head to the foot.

3. The relative portion of grey matter is much greater in young than in adult animals. Exactly the reverse obtains in the cerebrum, the convolutions of which, in very early life, are exceedingly imperfect.

4. The *fibrous matter* displays on the external surface of the cord certain fissures, dividing it into a number of columns. Of these fissures, two are placed on the median plane, one on the anterior, and the other on the posterior part; besides these, there are on each side two others, the anterior and posterior lateral. The median fissures, of which the anterior is much the deepest, are for the reception of processes of the pia mater, which not only serve to convey bloodvessels towards the interior, but likewise to support and steady the divisions or columns of the cord; the anterior and posterior lateral fissures also give entrance to bloodvessels, but in addition they transmit certain filaments of the spinal nerves, which in these situations dip inwards towards the central part of the cord.

The columns thus formed are seen, on examination to be composed of longitudinal fibres.

"It has been very generally admitted that of these columns, the anterior is for the transmission of volition, and the posterior of sensation, whilst the middle has been supposed by Sir C. Bell and others to be in a more especial manner connected with the movements of respiration. But it is very doubtful

if all this be correct; for though the spinal cord undoubtedly contains a number of fibres anatomically and physiologically distinct from each other, for the transmission of volition and sensation, yet it is by no means certain that these are placed in the anterior and posterior columns respectively. On the contrary, Sir C. Bell has himself stated, that he has not hitherto succeeded in tracing a connexion between the posterior or sensitive roots of the nerves and the posterior column, and Mr. Swan remarks that there is a direct line of separation between the anterior and posterior columns placed next the median plane, and that lateral part which gives origin to the nerves. My experience entirely coincides with this latter statement; as, notwithstanding the most careful examination, I have never been able to trace any fibres from the nerves into the fasciculi composing the anterior and posterior columns; the anterior and posterior lateral fissures appear definitely to limit the two roots. As the properties of these columns will be again noticed in a future chapter, it is only necessary to remark further, that their fibres approaching the medulla oblongata, form a distinct decussation not only from side to side, as is seen in the corpora pyramidalia, and in the cords lately described by Sir C. Bell, but also as Mr. Solly has shown from before, backwards; that after this remarkable disposition, the fibres are still continued uninterruptedly upwards, till they reach the convolutions of the cerebrum and the laminæ of the cerebellum, where they terminate, after presenting a connexion with the grey matter, somewhat similar to the incrustation of the white fibres in the corpus striatum."—31.

On opening the anterior median furrow and separating the two lateral columns, a white layer is perceived at the bottom, the direction of the fibres of which it is difficult to determine; a somewhat similar structure is seen in the posterior median fissure. Gall and Spurzheim have represented a commissure consisting of transverse fibres joining the lateral columns; and Mr. Swan speaks of transverse threads passing from one side to the other. These fibres Mr. Grainger has satisfactorily distinguished.

5. *Anatomy of the Spinal Nerves.*—We need scarcely

observe, that each spinal nerve has two roots, each of which apparently terminates in the lateral fibrous columns above described. Attempts have been made to trace these origins deeper, and Mr. Grainger gives the following account of them.

"Although Vicq. d'Azyr had formed a similar conjecture, it appears that Gall was the first anatomist who distinctly announced that the spinal nerves are connected with the grey substance of the cord. Bellingeri subsequently adopted this opinion; but he, with justice, opposed the idea of Gall, that all the fibres of the nerves are joined with the grey matter. Bellingeri attributes both to the anterior and posterior roots, a triple origin; the former arising by two of its roots from the white fibrous parts, and by the third root, *perhaps*, from the grey matter; the latter arising by two roots from the fibrous part, and by the third from the posterior horn of the grey substance. Mr. Mayo, who in one place distinctly affirms that the origin of a nerve is always in part from grey matter, speaks more doubtfully of the double connexion with the grey and fibrous substances; for, when treating of the spinal nerve, he says, that the filaments of the two roots *appear* to be partly continuous with the white fasciculi of the cord, and partly to originate in the interior of the grey matter. In an earlier edition of his Physiology, Mr. Mayo has given a representation of this two-fold connexion, which is, however, very incorrect, and has been omitted in the later editions of that work.

Keuffel, Ollivier, and Weber likewise state that the nervous fibres may be followed into the grey substance, a connexion which is also admitted by Professor Arnold.

Several distinguished anatomists deny, however, the possibility of demonstrating the union of the fibres of the nerves with the grey substance of the cord. Sir C. Bell, in allusion to this subject, says, 'Some authors describe these roots as derived from the cineritious matter; this is quite at variance with my dissections.' Bellingeri himself is not certain that the anterior root is thus connected; whilst Desmoulins denies the connexion altogether."—33.

Desmoulins, indeed, contends that the grey matter does not exist in the spinal cord of reptiles and fishes, but that there is in the centre a canal filled with a serous fluid, but, as Mr. Grainger observes, there are many reasons for hesitating before we subscribe to this assertion.

Rolando describes the nerves as being connected only with the white substance. Professor Muller gives no positive opinion. Mr. Swan thinks it doubtful whether the nerves are connected with the grey matter of the cord. Mr. Grainger has examined the subject with care, and appears to have ascertained some important facts. It is impossible in articles of this nature, to abbreviate description materially. Selection is more necessary, or more practicable than analysis.

"In considering," says he, "the interesting phenomena related by Dr. M. Hall, it occurred to me, that it might be possible to demonstrate the separate existence of what he has called the incident and reflex fibres; and I was thence induced to dissect, with much care, the two roots of the spinal nerves. After repeated examinations, I satisfied myself that each was connected both with the external fibrous part of the cord, and the internal grey substance. The following is what appears to be the structure: after the two roots have perforated the theca vertebralis, and so reached the surface of the cord, it is well known that their fibres begin to separate from each other; of these fibres some are lost in the white substance, whilst others, entering more deeply into the lateral furrows, are found to continue their course, nearly in a right angle with the spinal cord itself, as far as the grey substance in which they are lost. But this arrangement has no resemblance to the distinct division into fasciculi depicted by Mr. Mayo; on the contrary, it is with great care only that small, delicate, and individual threads or striæ, as it were, are traced, dipping into the lateral fissure, and at length joining the grey matter. This difficulty is owing to the fact, that whilst the fibres on the outer surface of the pia mater adhere very intimately with that strong membrane, on its inner surface, the neurilema becomes so extremely delicate, that the fibres lose much of their firmness, and break on the application of the least force; an

accident which always happens, if the pia mater be raised from the surface of the spinal cord, beyond the point where the nerves are attached. When the filaments have penetrated into the fissure, they lose their rounded figure and become flattened, and are then seen passing to the grey substance at a right angle to the longitudinal fibres of the cord. It is extremely difficult, owing to the delicacy of the parts, to determine the exact relations which exist between the above filaments and the grey matter; but in a few dissections, I have been able to perceive these fibrils running like delicate striæ in the grey substance. In one instance the fibres being more distinct than usual, an appearance was presented having a remarkable resemblance to that which is seen, on making a section of the corpus striatum in a recent brain, after the method of Spurzheim. My friend and colleague Mr. Cooper, in this case counted distinctly five separate fibrils passing from the anterior root of one nerve, and there were some other fibres derived from the same root, which were not so plainly seen.

From numerous examinations I am induced to believe, that whenever the white fibres of the nervous system become connected with the grey substance, whether in the different masses of the brain, in the spinal cord, or in the ganglions, the arrangement is similar to what is seen in the section of the corpus striatum, to which reference has just been made. The fibres become as it were encrusted with the grey matter, a disposition which may even be seen by a careful inspection in the convolutions of the cerebrum, in which the radiating fibres of the crus cerebri are observed like delicate striæ.

In examining the roots of the nerves I have always relied on the assistance of the naked eye only, avoiding, for fear of deception, the use of a lens; it also appeared to be preferable to dissect the parts quite in their recent state, so that the natural structure was entirely preserved. The method of Reil which is so useful in tracing the fibres of the brain, is quite inapplicable in the present case; and Bellingeri has shewn that the use of acid renders it very difficult to distinguish the nervous filaments from the bloodvessels."—36.

Mr. Grainger had demonstrated this arrangement to his friends, some months before he visited Germany. There he met with so much disbelief, that he again demonstrated it to the entire satisfaction of Professor Bischoff, of Heidelberg. Mr. Grainger is convinced that only a part of the fibres belonging to the two roots are attached to the grey substance, a considerable number of threads being lost in the fibrous part of the cord. Many speculations have been hazarded with respect to the exact mode of communication; but, in point of fact, we know nothing positive concerning it.

The cranial nerves resemble those of the vertebral canal, in being attached both to the grey and the fibrous substances. On this point Mr. Grainger dwells at some length, and as it is an important one, we shall follow him into details.

A. *The Third, or Motor Oculi.*—It is stated by Mr. Mayo, that this nerve arises by many fibrils, from the black matter in the crus cerebri. This account is perfectly correct, as far as it extends, but it is not complete; for, as Mr. Solly has shown, some of the fibres are attached to the motor cord in the pons Varolii. But what is particularly interesting is, that after the fibres have spread out into the grey matter, or locus niger, some of them may, with care, be followed into the fibres which constitute the upper portion of the crus. Now, this part of the crus cerebri has been described by Sir C. Bell, as receiving certain fasciculi derived from the posterior or sentient column of the spinal cord, where it forms the calamus scriptorius of the fourth ventricle, and which subsequently pass upwards, through the thalami nervorum opticorum, to the cerebral hemispheres. In this manner, as the optic nerve in its origin is united with this tract, an intimate relation is established between it and the motor oculi; which, Mr. Grainger conceives, is connected with the interesting phenomenon noticed by Mr. Mayo, that, on pinching the divided cerebral end of the optic nerve, the iris contracts.

B. "In considering the disposition of the incident and reflex filaments of the posterior and anterior roots of the spinal nerves, it occurred to me, that, after being incrusted as it were by the grey matter, like the fibrils of the portio

major of the fifth, in their course through the Gasserian ganglion, these two orders of fibres might become continuous with each other, and thus offer a satisfactory explanation of the mode in which impressions made on the nerves of the skin, are transmitted to those of the muscles; and although, owing to the extreme delicacy of the structure, I have not succeeded in tracing this connexion, the analogy of the third nerve renders it very probable that such an arrangement of the nervous fibres does in reality exist."—40.

c. *The Sixth, or Abductor Nerve*, proceeds our author, is usually described as arising from the corpus pyramidale; but, if the longitudinal fibres of that body be cautiously separated with the point of a fine instrument (a cataract needle, for instance,) it will be found that the larger part of the nerve sinks deeply into the substance of the medulla oblongata, and there, assuming the form of a flat cord, at length reaches the grey matter. It is difficult to perceive with what fibres of the cord this nerve is connected.

d. *The Facial Nerve*, which, at the lower edge of the pons Varolii closely approaches the descending trunk of the portio major of the trigeminal, seems to be joined, by a few fibres, to the grey matter in the interior of the pons, and upper part of the medulla oblongata.

e. *The Sublingual Nerve*, by raising the pia mater as far as the outer border of the pyramidal body, may be observed to send a few fibres into the grey substance placed on the inner side of the corpus olivare.

f. "*The Portio Major of the Fifth*, and the pneumo-gastric in consequence of the very important part they bear in the excito-motory phenomena, require to be especially considered. The former passes, as it is known, through the whole substance of the pons Varolii, and ultimately reaches the posterior column of the medulla oblongata. In this situation, closely approaching the origins of the auditory, facial, glosso-pharyngeal, and pneumo-gastric nerves, it becomes attached not only to the white fibres, but also to a mass of grey matter, apparently continuous with that which is placed in the floor of the fourth ventricle. The remark of Mr. Mayo, that

this portion of the fifth and the portio dura rise together, is full of physiological interest."—41.

6. *The Glosso-Pharyngeal and Vagus.*—Some of their fibres, after passing very deeply through the ascending fasciculi of the corpus restiforme, reach the grey matter placed in the posterior part of the medulla oblongata; the connexion with the fibrous structure is not so evident. Mr. Solly considers the corpus olivare to be the ganglion proper to the pneumo-gastric nerve; but no fibres of the nerves can be traced into the grey matter of that body, in the human brain. Two roots of the vagus have been spoken of, but it is difficult to demonstrate them; nor, although the two portions of the glosso-pharyngeal may be seen in the foramen lacerum posterius, where that nerve presents the ganglion discovered by Muller, has Mr. Grainger been able to trace them as separate roots into the medulla oblongata. Yet, as he observes, the probabilities are greatly in favor of the opinion that two roots do exist.

II. Mr. Grainger next dwells on the comparative anatomy of the cord. But we are unable to follow him.

I. On the whole, the investigations of Mr. Grainger go towards the confirmation of the opinion which has latterly been all but universal;—that, the spinal cord is not merely an appendage of the brain. Its two substances are in all probability endowed with distinct powers, and, probably also, the grey matter in the cord has its peculiar powers. Mr. Grainger surmises, that—

"In fact, it constitutes, with the nervous fibres attached to it, the true spinal cord, the existence of which, as a structure independent of the brain, was first declared by Dr. M. Hall.

The second portion of the spinal cord consists of the white fibres, all of which, after a most complicated disposition, seem to extend to the convolutions of the cerebrum and the layers of the cerebellum; it may, therefore, with propriety be called the cerebral part of the cord.

The result of dissection further shows, that in the skin and all other sensitive surfaces to which the so called sentient

nerves are distributed, there are, in reality, two orders of fibres essentially distinct from each other; one set terminating in the grey substance of the spinal cord, and the other in the white or cerebral fibres. In the same manner, with respect to the nerves distributed to the muscles, it is proved that each contains one class of fibres running into the grey matter of the cord, and another order ending in its cerebral portion.*

Thus, in the compound nerves of the body, there are in reality four instead of two different classes of fibres; and, when the physiology of these parts is considered, it will be made apparent, that these several fibres transmit different impressions: that of those going to the brain, the fibres derived from the sentient nerves, transmit impressions which excite sensation, and those belonging to the motor nerves, volition; that of the fibres attached to the grey matter of the cord, those derived from the sentient nerves, transmit impressions made on the skin to the true spinal cord, the peculiar power of which they excite; whilst those derived from the motor nerves, transmit to the muscles the effects of the power thus excited. Of these four classes, I conclude, that those attached to the grey matter are the incident and reflex nerves of Dr. Hall; and that they, together with that matter, constitute the true spinal or excito-motory system."—47.

It is difficult to perceive how Mr. Grainger has proved, or proves—that "the result of dissection further *shews*, that in the skin and all other sensitive surfaces to which the so called sentient nerves are distributed, there are in reality, two orders of fibres, essentially distinct from each other; one set terminating in the grey substance of the spinal cord, and the other in the white or cerebral fibres." Nor is it easy to understand how he reconciles this affirmation in his text with the contrary negation in his note;—that, "these different orders of

* "It is no argument against this statement, that these different orders of fibres cannot be demonstrated in the nervous cords going to the skin and the muscles. The same kind of objection applies to the existence of the sentient and motor fibrils in the compound nerves, which cannot be distinguished mechanically from each other; and yet no one doubts the justice of Sir C. Bell's conclusion as to their independence both in an anatomical and physiological point of view."

fibres cannot be demonstrated in the nervous cords going to the skin and to the muscles."

The comparison between these fibres, which can and cannot be observed, and the two roots of the spinal nerves is imposing, but, perhaps, not perfectly fair. Those roots are obvious to the naked eye, can be handled, dissected, separately cut in living animals. Their palpable character prevents anatomical dispute—their positive separation has facilitated physiological experiment—and the direct results of the one and of the other have established the undeniable fact of the different properties of the two roots.

But the anatomical basis of the "reflex" theory, however plausible, however pretty, and however *probable*, is by no means so obvious nor so satisfactory. The different fibres, which it is necessary to distinguish, have been *seen*, it is true, by Mr. Grainger, and are admitted by Professor Bischoff; but they were seen by the one with trouble, and have been admitted by the other with difficulty, nor have the mass of anatomists yet examined or assented to the grounds of belief in either. To compare such fibres to the two roots of the spinal nerves is to campare a small quantity with a great, an uncertainty with a demonstration, and such comparison cannot, in an exact science like anatomy, be unchallenged.

So far as we can see our way, it appears to us that these investigations of Mr. Grainger's have great merit, and that they demand on the part of anatomists much attention, and an impartial scrutiny. Yet it may be said that, so far as physical discovery is concerned, he has *seen* what others have *said* they saw, or have surmised; and it is rather in the elaborate character of his inferences, and in his application of his facts to the support of the "reflex" theory, than in new views or in new facts, that he differs from his predecessors or contemporaries. But to revert to the text of that gentleman.

Having decided that there exist, besides the nerves of sensation and volition, two other classes which are anatomically and physiologically distinct, it becomes, of course, necessary for him to distinguish these different orders by separate names.

"Dr. M. Hall has proposed to call the fibres, which pass from the skin to the true spinal cord, the *incident nerves*, and those, which proceed from the true spinal cord to the muscles, the *reflex nerves*. These terms are very expressive of the powers, which these filaments probably possess of transmitting impressions in the directions indicated by their names; and, therefore, may be with propriety adopted in treatises in which the excito-motory phenomena are considered. But, as at the present time, doubts still exist with respect to the exact mechanism by which the reflex action of the cord is effected, it is advisable to select, for general purposes, terms merely expressive of the facts which are established by the evidence of anatomy, and which do not involve any hypothetical doctrine. In this manner the nerves of the cerebro-spinal axis may be divided, as, indeed, Dr. Hall has proposed, into the true cerebral, comprising the true sentient and the true volition fibres; and the true spinal, consisting of those fibres derived from the anterior and posterior roots which enter the grey matter of the cord.

With these facts before us, the dispute, respecting the existence of what are called the cerebral nerves, is readily determined. It is well known, that whilst such nerves are admitted by some physiologists, the majority of writers in the present day contend, that all the nerves contained within the cranium, are spinal nerves. Neither of these opinions is correct; for each of the cranial nerves is, in reality, composed like those attached to the vertebral part of the spinal cord, of a true spinal and a true cerebral portion; the former being attached to the prolongation of the grey matter of the cord, and the latter, to the sensiferous and volition fibres, which ascend to the grey matter of the cerebral convolutions. The only nerve which, perhaps, consists of cerebral fibrils alone, is the olfactory."—48.

Mr. Grainger continues:—

"It is necessary, in conclusion, to point out a very important principle, in accordance with which the origin of the incident and reflex nerves is governed. From the office which has been assigned to the former, of transmitting the

impression of physical agents to the latter, it is evident that there must be, as Professor Muller has remarked, a ready means of communication between them. In obedience to this necessity, it is found that the central extremities of the incident nerves do, in reality, very closely approach the central extremities of those reflex nerves, with the function of which they are associated. This principle is very evident in all the spinal nerves, the incident and reflex fibres of which are attached to corresponding segments of the grey substance; and the same disposition is evinced in the incident and reflex fibres of the several cranial nerves, when they are traced with sufficient minuteness."—48.

Mr. Grainger alludes to Mr. Mayo's remark, that—nerves of motion take their rise from the same region or segment with those sentient nerves which transmit the impressions by which their action is usually regulated. This principle, Mr. Grainger observes, does not apply to the *sentient*, but to the *incident* nerves; for the true sensiferous or cerebral fibres are not thus attached with the volition fibres of the motor nerve, to corresponding masses of the grey matter; on the contrary, the sensiferous fibres of the posterior roots, although for the convenience of arrangement they approach the volition fibres of the anterior roots in the spinal cord, yet they continue upwards till they reach the various convolutions of the brain. Our author adds that—the explanation now offered of this fact affords a satisfactory elucidation of a principle which, otherwise, could not be comprehended: for, whatever assertions there may be to the contrary, it is certain that there is no necessary relation either between muscular contractility in general and sensibility, or between this latter property and the contraction of that portion of the muscular system, which is under the influence of volition.

Following the arrangement of the author, the reviewer next considers "the Physiology of the Spinal Cord;" but we find that farther space cannot be allowed for his article in the present number of our Journal, without excluding matter which we are anxious to lay before our readers. This has

been furnished by the organization of the "College of Physicians and Surgeons" in this city,—an association from which we hope to receive, from time to time, much valuable and interesting matter.

We regret the less our inability to publish the article entire from the Medico-Chirurgical Review, inasmuch as the subject is but very cursorily treated, on account of its having been presented in former numbers of that excellent Quarterly. We shall revert to the Physiology of the cord in our next number, and endeavor to make our readers acquainted with the new views, to which recent researches have led.

COLLEGE OF PHYSICIANS AND SURGEONS OF LOUISVILLE.

PATHOLOGICAL ANATOMY.

The committee on Autopsies, consisting of Drs. Thomas L. Caldwell, Lewis Rogers, and Richard W. Ferguson, made the following Report, at a late meeting of the College:—

Since their appointment on the —— day of March, they have either individually or collectively been engaged in nine post mortem examinations. Of this number eight died at the Louisville Marine Hospital, and one had been a case in private practice. Some of these presented points of considerable interest in their pathology. They have been drawn up by the different members of the committee, submitted for mutual inspection and approval, and are here united so as to form a continuous report. For any defects either of matter or manner that may appear in it, the committee hope that a

want of the necessary experience in preparing a document of the kind will sufficiently plead their apology.

CASE I.—*Hemiplegia.* Reported by Dr. LEWIS ROGERS.

Dr. Hope in his article on Arteritis, contributed to the British Cyclopedia of Practical Medicine, makes the following observations:—"In the arteries at the base of the brain, calcareous and other degenerations are remarkably frequent, and are a principal cause of apoplectic effusions. It is rare indeed to meet with such effusions exclusive of those dependent upon external violence, in which some disease of these arteries cannot be detected; and it may be remarked in passing, that in most instances the disease of the artery is connected with hypertrophy of the left ventricle; whence it appears to be referable to over-distension, to which the cerebral arteries are more obnoxious than others, in consequence of their being without the cellular coat, and being ill-supported by the pulpy yielding substance of the brain. We have met with several cases of epilepsy which had no other obvious cause than disease of the cerebral arteries."

The committee on Autopsies of this college, have had an opportunity of making a post mortem examination of a patient who died of *Hemiplegia*, strikingly illustrative of the pathological condition above described.

Patience, a free negro woman aged about 50 years was admitted into the L. M. Hospital early in February, laboring under the following symptoms:—Complete loss of motion and partial loss of sensation of the entire right half of the body, with very feeble control over the muscles concerned in the voice and deglutition—involuntary discharge of urine and constipated condition of the bowels. Temperature of affected side much lower than natural with a shrivelled condition of skin—fingers of right hand in a permanent state of incurvation and rigidity—in a word, presenting most of the characteristic phenomena of confirmed Hemiplegia. For a short time previously to her death, ulceration of her gums and external parts of the cheeks supervened, presumed to be in

consequence of the exhibition of a small quantity of calomel. Nothing could be learned of her history anterior to the date of her reception into the Hospital; and though the case seemed hopeless, a suitable though cautious treatment was pursued with her. She died on the 21st of March, and presented on inspection the following appearances:—

Membranes of brain healthy. On the summit of left hemisphere, a little anterior to the middle, the cerebral substance presented a depressed, flaccid, brownish yellow appearance; on cutting into this portion, the substance of the brain seemed to be dissolved into a semi-fluid brownish yellow material, somewhat more consistent than, but not unlike ill-digested pus. The limits of the lesion were not well defined, but nearly of the size of a small almond in extent—no traces of a cyst could be detected. In the *corpus striatum* of same hemisphere a similar degeneration or disorganization in size and character, was found. In the *thalamus nervi optici* of the same side, a firm clot of dark blood about the size of a large pea was discovered, the cerebral substance surrounding which had also a brownish yellow color. All the arteries at the base of the brain, including those ramifying into the different fissures had undergone more or less of a cartilaginous degeneration; in some parts the cartilaginous matter was deposited in rings, in others in plates; it could be traced until the arteries lost themselves in the convolutions of the brain, and where abundantly secreted gave an irregular, knotty appearance to the vessel which first excited our attention. The inner coat of the arteries was in many places so remarkably thickened, as doubtless entirely to clog the circulation, and when pressed between the fingers, exuded in the form of a caseous pulpy material.

In the ventricles, a small quantity of turbid fluid was found, looking like serum holding pus in solution or mixture. The right hemisphere of the cerebrum was healthy with the exception of an unnatural pallor which it had in common with the left.

Comparing the left lobe of the cerebellum with the right, the vessels were much more visible, and in cutting into its

substance, blood flowed from its divided surface, which was not the case with the right.

Lungs perfectly healthy. Immediately on opening the thorax, the large size and firm texture of the heart arrested notice; the muscular substance of the left ventricle was hypertrophied to fully three times its ordinary thickness, and constituted far the greater portion of the organ; instead of its pale red color and flaccid feeling to the touch, it was firm, plump and unyielding when embraced by the hand, and of a florid hue;—right ventricle, auricle, and their appurtenances connected with the heart were free from alteration. Wet preparation of heart exhibited—the viscera of abdomen presented no special deviation from their normal condition.

Tbe appearances observed in the brain left a doubt upon the mind as to whether the softened portions of the brain were to be esteemed as specimens of yellow ramollissement dependent on impeded circulation through contracted and cartilaginous vessels, similar to the cases described by Rostan, and having an affinity to the gangrene occurring in the feet and toes of old people, in whose arteries ossification exists; or whether the Hemiplegia depended on effused blood, which though absorbed, had given rise to a gradual softening of the tissue of the brain, in which all traces of cysts, if any had ever existed, had been obliterated. Either supposition would account for the lesions existing, and the death of the patient.

Case II.—*Tubercular Phthisis with Bronchitis.* Reported by Dr. Rich'd. W. Ferguson.

Geo. Sheltz, a German æt. 31, of athletic frame, was admitted into the L. M. Hospital on the 21st of March. He had been under treatment about four months in the city.

Symptoms at the time of admission:—He appeared to have some tenderness of the larynx upon pressure, with a husky whispering voice—pulse 90, regular and moderately strong—

tongue pretty good—sound by percussion on the right side of the chest dull and unnatural. A vomit of Ipecac was prescribed for him, to be given the following morning, which operated twice slightly, but he sunk under its operation and died.

Post mortem appearances:—There was a large abscess in the posterior portion of the left lung, with firm adhesions from the second to the eighth rib. The tubercles of the left lung had nearly all been converted into abscesses, some of them communicating with each other. Those disseminated in the right were much smaller, some mere granules, others the size of marbles,—these had advanced to a state of suppuration; the matter contained in them was thick and yellow. The interstices between the tubercles in most places were of a harder and firmer texture than natural.

The bronchial tubes were filled with thin frothy purulent matter up to their bifurcation.

The lateral surfaces of the Thyroid cartilage exhibited deep ulcerations; and considerable thickening of the bronchial mucous membrane appeared throughout its whole structure.

There was *Hydrops Pericardii*, but no collection of water in the other cavities of the chest. The heart stuffed with blood, and its sides thin, flaccid and dilated.

Case III.—*Chronic Diarrhœa.* Reported by Dr. Rich'd. W. Ferguson.

——— *Kluge*, a boatman æt. 50, a German by birth—admitted into the L. M. Hospital the 25th of March—stated that he had had diarrhœa for two months.

The symptoms at the time of admission were—tenderness of abdomen on pressure, not however confined to any particular part—tongue brown and dry in the centre, edges moist—legs swollen, hands and arms somewhat livid. His

pulse ranged from 60 to 110 during his illness; some days it was irrregularly intermittent.

Drowsiness supervened for the first time on the last day of the month, which increased upon him to such a degree as to approximate, the day after, a comatose state. His respiration became at the same time laborious, with dry cough. The dejections from his bowels were generally of a thin mucous character, not unlike the washings of meat, and devoid of odor. Occasionally these discharges were tinged with green, and towards the close of life, an admixture of blood.

Morbid appearances discovered in the autopsy were dark brown induration of the liver, without enlargement—gall bladder full and distended with thick black bile—increased vascularity of the mucous membrane of the stomach and of small intestines, and about ten inches of the sigmoid flexure of the colon presented many transverse streaks of ulceration, some apparently of recent date. There was considerable diminution of its area at the commencement of this diseased portion—owing to the great thickening of its coats giving almost a cartilaginous appearance to the extent above mentioned.

The lungs presented two or three old adhesions, otherwise healthy. Heart, spleen and pancreas healthy—brain and kidneys not examined.

Case IV.—*Dropsy.* Reported by Dr. Lewis Rogers.

Wm. Turpin, a native of Tennessee and aged 25 years, having suffered from Intermittent Fever and enlargement of spleen for several years was admitted into the L. M. Hospital, and after the ordinary diuretic and purgative treatment, died of Dropsy, April 6th. Post mortem 18 hours after death. Anasarca general and face very remarkably tumid—head not examined—lungs unaltered in any portion of structure—about twelve oz. of serum effused in cavity of thorax—peri-

cardium healthy, but containing more than usual quantity of serous fluid—both ventricles of heart dilated to twice their natural dimensions, with slight hypertrophy of muscular tissue; fatty substance about base of heart, replaced by serum;—same condition of mediastinum. Wet preparation of heart exhibited.

Spleen enlarged to four times its natural size and very much indurated; some preternatural adhesions to surrounding parts—liver slightly increased in size, but otherwise healthy.

Stomach and small intestines healthy—mucous coat of colon somewhat reddened, and glands slightly enlarged.

Right kidney much engorged with blood; left very pallid, and containing embedded in its substance two small cysts filled with serum—only a small quantity of urine existing in the bladder, and that containing floating particles of mucus, could not accurately test its coagulability by heat and acids.

Blood in vena cava small in quantity and uncoagulated—general condition of patient anæmic—only a small quantity of effused fluid in cavity of abdomen.

CASE V.—*Paraplegia, Peritonitis, &c.* Reported by Dr. THOS. L. CALDWELL.

——— *Ross*, aged about 40, a native of Sweden—had formerly followed the sea, but for the last four or five years had been a patient in the L. M. Hospital. A full and detailed account of his case could not be procured. The affection, however, which had so long confined him, was Paraplegia, induced at first as was believed by obstinate and habitual constipation of the bowels. The attack of disease under which he sunk was Peritonitis, followed by effusion into the cavity of the abdomen.

Examined 12 hours after death, which occurred on the —— of April. In making the autopsy, the attention of the committee was first directed to ascertaining the lesion of the nervous system causing the paralysis. In this, however, they

were completely foiled. The spinal column was carefully laid open from one extremity to the other, without their being able to detect the slightest trace of inflammation, either recent or of an old date. Every thing appeared normal—no inflammation nor thickening of the investing membranes—no deposite within them nor tumor pressing upon the cord—no degeneration nor change of structure in the cord itself, nor any in the vertebral column could be found, which would throw the least light on the functional derangement so long existing.

The same was the case with every part of the cerebrum and cerebellum, of which they made also a careful examination.

Nothing abnormal presented itself on inspecting the contents of the thorax, except a few adhesions, the result of former inflammation.

Very different was the condition of the abdominal viscera. On opening the cavity, a putrid mass was presented to view, the whole front of the intestines being covered with a thick continuous coating of effused lymph, the result of intense inflammation, and in a state of decomposition. The convolutions of the intestines were cemented by preternatural adhesions, and the whole bulk adherent to the parietes of the abdomen and pelvis. The adhesion to the bladder required no little force to break it up. A considerable amount of dropsical effusion was found, though the patient had been tapped but a few days before his death—the wound made by the Trochar being still open and in a gangrenous condition.

The omentum much thickened, with a very heavy deposite throughout its structure of coagulable lymph, which, from its organized appearance, the committee considered as by no means of recent origin. In many parts it was nearly an inch in thickness.

Liver considerably enlarged—its color a pale brownish yellow—its structure changed, somewhat softened and unctuous to the touch—presenting, as the committee thought, a specimen of what is termed by modern writers the fatty degeneration of that organ.*

* See an article by Dr. Addison in the 1st vol. of "Guy's Hospital Reports," on "fatty degeneration of the liver."

The gall bladder was smaller than natural, containing but a few drops of light colored vitiated bile, the rest of its cavity filled with gall stones of various sizes, a light color and regular figure. Gall bladder and contents exhibited. These, with the bladder are preserved. About two or three days before his death, the patient had passed one or two gall stones *per anum*, and there is reason to suppose that some recent attacks, considered at the time as colic, may have proceeded from the irritation occasioned by the passage of other gall stones through the duct.

Spleen much enlarged, but not otherwise altered in appearance or structure.

CASE VI.—*Delirium Tremens.* Reported by Dr. LEWIS ROGERS.

——— Zimmerman, a native of France, age 50 years, died in the L. M. Hospital of Delirium Tremens on the 26th of April—having been admitted to the institution two days before. For some thirty-six hours previous to death, had been treated with opium in quantity which might be deemed moderate, in reference to the disease under which he labored.

Post mortem examination revealed the following appearances:—Head; dura mater healthy—arachnoid of both hemispheres separated throughout from pia mater, by effused serum—pia mater carrying a larger amount of engorged bloodvessels than usual—cerebral substance healthy in consistence, but presenting when incised a larger number of red points than usual—rest of structure in sound condition.

Viscera of thorax all healthy.—Abdominal viscera presenting no well marked variation from health, except in the liver, which was altered in color to a brownish orange, somewhat indurated, and contained near the central part of the convex surface of right lobe a cyst an inch or more in diameter, filled with limpid serum. Surrounding texture of liver more indurated than elsewhere;—cyst from the thickness of its coat seemed to have existed for some length of time.

CASE VII.—*Hæmatemesis.* Reported by Dr. THO. L. CALDWELL.

Chas. Chaucer, Mexican, and in part of Indian descent, was admitted to the L. M. Hospital, April 22d. Had been unwell for six months before;—attacked five weeks since with chilliness and discharge of blood by the mouth. Symptoms at the time of admission:—Tongue dry and furred in centre, moist and pale at edges—bowels constipated—no dejection for five days—some dulness on percussion of the left side of thorax—skin hot and dry—pulse 106 and tense. During his sickness two or three attacks of Hæmatemesis recurred, and his bowels were considerably deranged. On the 27th, coma gradually supervened—he continued to sink and died on the 28th.

Examined 12 hours after death—Thorax;—lungs natural in appearance—and on careful examination, their structure normal throughout. Heart large in size—proportions and structure healthy, but an unusual quantity of adipose matter around its base.

Abdomen;—an uncommon amount of adipose matter throughout the whole mass of intestines—the omentum completely loaded with the same. Stomach, large in size and distended. On being taken carefully out and opened, about 3 or 4 pints of a bloody fluid were found in it, mixed with large coagula of blood, and having a peculiar odor somewhat resembling the sour lees of malt liquor. It was from this organ evidently that the blood vomited during his sickness had proceeded, and not from the lungs. Some slight traces of inflammation were discoverable near the pyloric end, and with the exception of this and in one or two small portions a little thickening of the mucous coat—no other lesion presented itself in the organ.

Duodenum—containing a fluid similar to that in the stomach. Jejunum—containing bloody mucus, ileum, green bile mixed with mucus;—the coats of these organs normal.

Liver a little enlarged in volume especially the lobulus spigelii, whose form was entirely changed—color much lighter than natural, and adherent firmly to the diaphragm and arch of the colon. Instead of its usual smooth surface, it presented

a knobbed or knotty and rough appearance over its whole extent. The interior structure had undergone a corresponding change. It was much indurated, its usual granular appearance lost, and in making incisions through it, the sensation was that of cutting through cartilage. It presented in a word a fine specimen of the tuberculated liver;—gall bladder large but healthy to appearance and filled with bile.

Spleen much smaller than usual, but structure and appearance normal.

No morbid appearances presented in the other viscera. From the condition and general aspect of the body it was believed that the individual had been intemperate, but nothing was known of his previous history.

CASE VIII.—Reported by Dr. LEWIS ROGERS.

James Donahoe, a native of Ireland, and aged 57 years, a common laborer and of intemperate habits, had been under treatment in the L. M. Hospital at different periods for the past two years;—died May 5th, and was examined 20 hours after death.

Autopsy—extreme emaciation—summit of right side of chest dull on percussion—naturally sonorous elsewhere—inferior portion of left side of thorax more full and prominent than right—decided incurvation of nails, of fingers and toes.

Thorax—left lung—apex slightly adherent to pleura costalis and inferior portion to diaphragm—paler than natural in exterior color—summit densely studded with grey semi-transparent granulations; middle third, less thickly studded, inferior third containing very few. Right lung—superior two-thirds strongly adherent to thorax—exterior color of inferior third more sanguineous than left—at the summit a large mult-ocular cavity—outer paries formed by pleura, filled with softened tubercular matter—below and posteriorly to this a smaller cavity of same character—rest of lung with exception of a small portion of inferior extremity, filled with tubercular granulations in various stages of advancement.

Epiglottis and mucous membrane of larynx slightly reddened with enlargement of glands of the same—bronchial mucous membrane somewhat reddened—heart of normal size; right auricle and ventricle filled with firm yellow coagula—no disease of valves—left ventricle containing very dark clotted blood—cartilaginous deposit in mitral valves—cartilaginous and small ossific deposite in semilunar valves and commencement of aorta—pericardium presented on its internal free surface a number of small granules, presumed to be tubercules—traces of former inflammation upon the portion adherent to heart.

Abdomen—stomach along lesser curvature, presented some extent of inflammatory redness and several small pendulous tumors, thought to be tubercular deposite enveloped in the mucous membrane—well marked tubercular deposite in a number of points along tract of small intestines, with softening and ulceration—submucous tissue of whole extent of large intestine, thickly studded with tubercular matter, with almost continuous surface of ulceration of mucous membrane from *cæcum* to *rectum*—mesenteric glands enlarged—liver normal in form and volume—of paler color and firmer consistence than natural—spleen healthy—kidneys apparently sound, but pelvis of right containing a small dark colored calculus. Some slight ossification observed along *abdominal aorta* and iliac vessels—head not examined.

REPORT OF THE OBSTETRICAL COMMITTEE.

Case I.—*Puerperal Convulsions during Labor.* Reported by Dr. Miller.

On the 26th of March at 2 o'clock, A. M., Dr. L. Rogers was called to Elizabeth Hill, Walnut street, between Floyd and Preston, and desired me to accompany him. The patient, aged about 14 years, had been taken in labor of her first

child the preceding evening, and shortly after labor commenced, was attacked with convulsions. She had frequently complained of headache for several weeks past, and to severe cephalalgia was added vomiting two days prior to parturition.

She had ten or twelve fits before we saw her; pulse, though excited, not particularly full or strong; articulation and intelligence suspended during the intervals; deglutition very imperfect; no marked throbbing of the carotids; countenance changeable, alternately flushed and pale. On examination, the os uteri was found high up and barely beginning to dilate. She was bled to about 18 or 20 oz.—stimulating, saline enemas, nauseating doses of tartar emetic. The convulsions continuing, in an hour and a half the orifice in the arm was opened, and about half as much blood as at first abstracted. No impression being made on the fits, an effort was made to deliver by turning, the os uteri having dilated considerably, though, as was feared, not sufficiently to allow of delivery. The attempt proved abortive, and the membranes were punctured with the hope that the relaxation consequent to the discharge of the liquor amnii might abate the convulsions. This was done at 6 o'clock in the morning, and we left the patient to procure instruments, directing the continuance of tartarized antimony. Returning at 8 we found the patient worse; pulse between 150 and 200, too rapid to be distinctly numbered, convulsions persisting, labor not advancing, the adnata of left eye injected, spasmodic respiration. It was now determined to deliver, and as the os uteri would not still permit the introduction of the hand, cephalotomy was the only resource; the head was opened at the posterior fontanel, and delivery accomplished in a short time, without any difficulty; the placenta was thrown down by uterine contractions, or apparently by the struggles of the abdominal muscles and diaphragm, to continue very laborious respiration. It being now manifest that the patient was greatly exhausted, she had toddy and several doses of laudanum, 30 to 40 drops.

Two o'clock, P. M. There has been no return of convulsions since delivery; the patient has laid quiet, has not spoken,

though there is manifest sensibility; pulse 150, weak. Prescription;—to have tea panada for nourishment and take 20 grs. calomel at bed time. 27th, 8 o'clock, A. M. She became restless at 8 in the evening and continued so all night; the head was incessantly in motion from side to side on the pillow; medicine had operated four or five times, bringing away small, serous discharges, of a yellowish color, mixed with white flocculi; bladder has not been relieved; the catheter was introduced and a pint of urine drawn off. Prescription.—The head to be shorn, cold application to it, dry cups to back of neck, calomel 25 grs. to be followed in six hours by castor oil and turpentine. Five o'clock, P. M. The patient has had two evacuations, green and more consistent; intelligence, puts out tongue when desired; has not spoke; restlessness continues; pulse rather improved though still very feeble; the forehead and cheeks exhibit remarkable redness, ascribed by attendants to chafing of the arms, passed incessantly over the face; no heat about the head. Prescription.—Catheterised, but little urine flowed; calomel 15 grs. to be followed by oil and turpentine. 28th, 8 o'clock, A. M. Medicine has operated freely, patient much better; pulse 120, soft; intelligence perfect; complains of some pain in the head, and abdominal soreness; fur on tongue loose; passed urine twice in night. Prescription.—Calomel 15 grs. Six o'clock, P. M. Had two small evacuations; tongue still furred; pulse as in morning. Prescription.—Calomel x gr., rhubarb xv grs. 29th, 8 o'clock, A. M. She passed the night quietly, though she slept but little; temperature natural; no headache; slight dry cough with hoarseness, the remains of catarrhal affection which she had before her confinement; bowels moved three times by medicine, dejections green and slimy; has appetite and desires solid food; urine passed frequently and freely; complains of heavy sensation about the womb and says "the Doctors have not taken away her child;" pulse 120, fuller and stronger. Prescription.—Quiet, demulcents, panada and chicken water, genital ablutions: Six o'clock, P. M. Reported to have had some fever and headache; pulse 125, more feeble than in morning; has had six consistent, green, slimy discharges through the day. Prescription.—No medicine; regi-

men as before. 30th, 9 o'clock, A. M. Slept well; complains of some headache; coloration of face diminished and expression natural; pectoral soreness and annoying cough with mucous expectoration; no alvine evacuation, urine passed freely; appetite good; no abdominal tenderness on pressure, but complains of the heavy sensation about the womb; pulse 120, stronger. Prescription.—Continue demulcents; more nutritious diet, chicken soup; to have common enema if bowels are not moved during the morning. Six o'clock, P. M. She feels much improved; no pain in head; cough better, tongue cleaning; has slept; bowels moved three times by the injection, discharges becoming natural; pulse 120, feeble. Prescription.—Continue regimen. 31st, continues to mend.—April 1st. Still improving; pulse 100; bowels free. April 2d. Still mending; discontinued attendance; recovered.

Case II.—*Convulsions immediately after the birth of the Child.* Reported by Dr. Miller.

On the 29th of March, 1838, Dr. Mosby was called two miles into the country to see Mrs. H———, aged 17 years, who was attacked with convulsions immediately after the birth of her first child, before the midwife had divided the cord. According to the midwife's report, nothing unusual had occurred during the labor, which was rather an expeditious for a first one. There was no flooding. The patient had complained of headache anterior to labor, and there was costiveness for which several doses of oil had been taken. When Dr. Mosby arrived she had had but one fit, was intelligent, cheerful, and talkative, complained however of some uterine pain and the pulse was active and accelerated. Venesection was proposed but objected to by the patient on account of her feeling so well. After a short time there was a recurrence of fit, and she was now freely bled and a messenger despatched for me. When I arrived, there was a calm, and hopes were indulged that there would be no return of convulsions, but shortly after she had another very violent

one. As there were no evidences of plethora and the pulse was not very strong or full, active enemas were used, 20 grs. calomel, dry cups to neck; after an interval somewhat longer than the preceding, repetition of fit; orifice in the arm was opened and 10 or 12 oz. blood taken away; castor oil and turpentine were given; enemas repeated: she had repeated, copious alvine discharges with the escape of much flatus: attempted to introduce catheter, but failed on account of great sensibility of parts and restlessness of patient. The bowels had now been freely evacuated and bleeding carried as far as seemed to be indicated, or as was prudent, pulse 150 to 60, weak, and notwithstanding, the convulsions continued to recur as frequently and violently as ever. It was now determined to try an anodyne enema, but, though twice administered, they were but partially retained, on account of the irritability of the rectum; an opiate suppository was substituted and a teaspoonful of laudanum was given by the mouth; the head was, also, now shorn and cold applied to it; sinapisms to feet and afterwards to back of the neck, which was replaced with a blister plaster, and 25 or 30 grs. calomel given. She had but two fits after the anodyne and revulsive medication; drowsiness during the interval and after the last fit, showing that she was narcotised. Convulsions ceased at 9 o'clock in the morning; in the evening still disposed to sleep, but perfectly rational when aroused; had passed no urine; catheterised, and a pint drawn off. Prescription.—Castor oil, to be assisted by enemas. 31st, morning: had rested well; pulse 105, soft; tongue swollen and very sore from being bitten; had passed urine; medicine had operated twice freely; uterus developed, reaching to umbilicus. Prescription.—Calomel 20 grs. to be followed in 6 hours by oil and turpentine; slippery elm water lemonade. April 1st. Improving; uterus subsiding; medicine had operated well; pulse still accelerated. Prescription.—Castor oil; continue demulcent drinks. April 2d. Bowels free; uterus subsiding; pulse accelerated; appetite. Prescription.—Oil. 3d. Continues to mend; slightly mercurialized; lacteal secretion sparing; pulse intermittent every 20th or 30th pulsation; appetite. Directed attention to diet and bowels and discontinued visits. She recovered without any untoward symptom.

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